EFFECTIVENESS OF POST STROKE REHABILITATION MODULE ON THE LEVEL OF KNOWLEDGE AND PRACTICE AMONG CARE GIVERS OF STROKE PATIENTS AT VIJAYA HEALTH CENTER, CHENNAI.

DISSERTATION SUBMITTED TO

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

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IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE DEGREE OF

MASTER OF SCIENCE IN NURSING

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ADL	-	Activity of Daily Living
AHA	**-**	American Heart Association
CI	**-**	Confidence Interval
CSN	**-**	Canadian Stroke Association
D.F	-	Degree of Freedom
GCS	**-**	Glasgow Coma Scale
HCP	**-**	Health Care Practitioners
HDL	**-**	High Density Lipoprotein
HRQOL	-	Health Related Quality of Life
ICCR	**-**	International Centre for Collaboration Research
ICH	**-**	Intra Cerebral Haemorrhage
LSCTC	**-**	London Stroke Carer Training Course
MWES	**-**	Mean Weighted Effect Size
NPCDCS	**-**	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke
QOL	**-**	Quality of Life
RGGGH	**-**	Rajeev Gandhi Government General Hospital
SANCD	-	South Asia Network for Chronic Disease
TIRSFSP	-	Timing It Right Stroke Family Support Programme
WHO	**-**	World Health Organization
WSO	**-**	World Stroke Organization

Effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients at Vijaya Health Center, Chennai.

Aim and Objective: To assess the effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients. **Methodology:** A quasi experimental, two group pre test, post test design was chosen to assess the level of knowledge and practice regarding post stroke rehabilitation module conducted at Vijaya Health Center, Chennai, caregivers of stroke patients who satisfied the inclusive criteria were selected as samples using purposive sampling technique . A post stroke rehabilitation module comprising a power point teaching, demonstration and reinforcement regarding post stroke rehabilitation module formed the intervention of the study. The pre and post test level of knowledge and post test level of practice was assessed using structured questionnaire and observational check list respectively**. Results**: The findings of the study revealed that the pre test score of knowledge was 11.4 with S.D of 2.17 and the post test mean score of knowledge was 9.97 with S.D of 1.19.The calculated 't' value of 16.620 was found to be statistically highly significant at $p<0.001$ level. The overall post test level of practice revealed that 5(16.67%) had good practice. The correlation of post test knowledge and practice score showed the 'r' value of 0.511 which was moderately significant at $p<0.001$ level**. Conclusion:** The result showed that the post stroke rehabilitation module was effective education tool in improving knowledge and practice of caregivers of stroke patients.

Key words: *stroke, post stroke rehabilitation module, caregivers of stroke patients.*

INTRODUCTION

Our brain is the boss of our body. It runs the show and controls just about everything we do. The brain is supplied with lots of blood vessels and capillaries which supply blood with nutrients and oxygen. When there is limited or no blood flow to affected areas of the brain; it results in a group of conditions known as "Cerebro Vascular diseases". Stroke (or) Cerebro Vascular Accident (or) Brain attack is common disease among all cerebro vascular diseases. Stroke is "a focal neurological impairment of sudden onset, and lasting more than 24 hours (or leading to death) and of presumed vascular origin" **(WHO, 2012)**

Stroke is the 2nd leading cause of death and disability. Globally, 20 million people suffers from stroke each year. 10 million survive and 5 million die but 5 million of them are severely disabled, requiring extensive medical and rehabilitative care. **(AHA Heart Disease and Stroke Statistics, 2011)**

Stroke rehabilitation is a progressive, dynamic, goal oriented process aimed at enabling a person with impairment to reach their optimal physical, cognitive, emotional and function level. **(Heart & Stroke Foundation 2010)**

In day to day life due to high dependency level of stroke patients, the caregivers are feeling burdened. It further affects the health related quality of life of patients as well as caregivers. Hence, training programme or educational programme for caregivers is essential, which reduce the stroke costs and improves quality of patient care and caregiver outcomes.

OBJECTIVE

To assess the effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients.

METHODOLOGY

Research Design:

Quasi experimental two group pre test and post test design.

Variables:

Independent variable

Post stroke rehabilitation module.

Dependent variables

Knowledge and practice of the caregivers of stroke.

Setting:

Vijaya Health Center, Vada palani, Chennai

Population:

Target population- All caregivers of patient with stroke

Accessible population- All caregivers of stroke patients, who were staying with client admitted at Vijaya Health Centre were accessible population. Approximately 70-90 clients with stroke are admitted every month.

Sampling- The caregivers of stroke patient who fulfil the inclusion criteria were selected by using purposive sampling technique.

Intervention

Post stroke rehabilitation module comprised of

a) **Knowledge:** Education through power point teaching, lecture cum discussion and the content focus on_
    - Definition of stroke
    - Incidence, types, causes.
    - Clinical manifestations and complications
    - Management and rehabilitation
        - Diet
        - Range of motion exercises
        - Communication

b) **Practice :** demonstration of procedures such as _
    - Lifting and transferring
    - Back care
    - Positioning
    - Naso gastric tube feeding

c) **Reinforcement:** A booklet on overview of post stroke rehabilitation module.

Measurements and tool

The pre and post test level of knowledge was assessed using structured questionnaire. It consists of 30 questions, formulated under separate subheadings .The level of knowledge was categorized as

≤50% - Inadequate level of knowledge

51-75% - Moderately adequate level of knowledge

≥75% - Adequate level of knowledge

The post test level of practice regarding post stroke rehabilitation module was assessed using observational checklist. It consisted of 35 statements and the overall score percentage was categorized as

≤50% - Needs improvement in practice

51-75% - Fair practice

≥75% - Good practice

Both descriptive and inferential statistics were used for analysis

RESULTS

The findings of the study revealed that the pre test mean score of knowledge was 11.4 with S.D of 2.17 and in the post test the mean score of knowledge was 21.93 with S.D of 2.75.the calculated 't' value of t=16.620 was found to be statistically highly significant at $p<0.001$ level which showed that the caregivers who underwent the post stroke rehabilitation module had significant improvement in their level of knowledge in the post test. The overall post test level of practice reveals that 5(16.67%) had good practice, 21(70%) had fair practice.

The correlation of post test knowledge and practice score showed 'r' value of 0.511 which was moderately significant at $p<0.001$ level. The association of post test level of knowledge and practice showed that the demographic variable type of family with post test level of knowledge had showed statistically significant association at $p<0.05$ level and the other demographic variables did not reveal any statistically significant association with the post knowledge and practice score of the caregivers of stroke patients in the experimental group.

DISCUSSION

There was a significant improvement of knowledge and practice of caregiver of patient with stroke in the post test after administration of post stroke rehabilitation module .Thus post stroke rehabilitation module was an effective education tool in improving knowledge and practice of caregivers regarding post stroke rehabilitation module, which in turn may improve the level of independency of patients, which helps the improve QOL of patients as well as caregivers and reduce the burden of caregivers in providing care.

IMPLICATIONS

Nursing education is the foundation on which the nursing practice is built. Sound knowledge creates and ensures delivery of sound practice. Hence, the education of post stroke rehabilitation module helps to reduce the caregivers burden after stroke and make the client live as an independent. Nursing curriculum should include rehabilitation aspects of health care, by conducting seminars, workshops and conferences for students regarding the recent advancement in stroke rehabilitation inorder to provide upto date information to enhance their knowledge.

Nurses play a initial role to work with caregivers of client with stroke to build their knowledge and practice in relation to stroke rehabilitation. This can be facilitated by motivating caregivers to participate in training /educational programme of post stroke rehabilitation module. The evidence based guidelines should be integrated into nursing practice to render effective and quality care.

Nurse administrator should initiate the organization of training programmes regarding post stroke rehabilitation module and they strengthen interdisciplinary and multidisciplinary collaboration with researchers for the purpose of transforming evidence into practice.

Nursing research is a powerful means of answering questions about health care interventions and finding. Hence, promote more research in the field of stroke rehabilitation and encourage the staff nurses to implement the research findings in their daily care and bring out more techniques to promote health of the clients.

INTRODUCTION

Our brain is the boss of our body. It runs the show and controls everything we do. The brain is supplied with lots of blood vessels and capillaries which supply blood with nutrients and oxygen. When there is limited or no blood flow to affected areas of the brain, it results in a group of conditions known as "Cerebro Vascular Diseases". The most common forms of cerebro vascular diseases are cerebral thrombosis (40%) and cerebral embolism (30%), followed by cerebral hemorrhage (20%). Other forms of cerebro vascular diseases include cerebral aneurysms, arterio venous malformations, moya moya disease **(Hickey V. Joanne, 2011).**

Stroke (or) Cerebro Vascular Accident (or) Brain attack is the 2nd leading cause of death and disability. Globally, 20 million people suffers from stroke each year. 10 million survive and 5 million die but 5 million of them are severely disabled, requiring extensive medical and rehabilitative care. High blood pressure contributes to more than 12.7 million strokes**(American Heart Association Heart Disease and Stroke Statistics, 2011)**

Stroke is "a focal neurological impairment of sudden onset, lasting more than 24 hours (or leading to death) and of presumed vascular origin".**(World Health Organization (WHO), 2012).** Most of the stroke patients tends to develop persistent cognitive and language disability, loss of mobility, decubitus ulcer, deep vein thrombosis, recurrent stroke, seizures, pneumonia, depression and disability.

Rehabilitation is a process of helping a person who has suffered an illness or injury, restore lost skills and regain maximum self-sufficiency. Stroke rehabilitation is a progressive, dynamic, goal oriented process aimed at enabling a person with impairment to reach their optimal physical, cognitive, emotional and function level. **(Heart & Stroke Foundation, 2010).**

In day to day life due to high dependency level of stroke patients, the caregivers are feeling burdened. It further affects the health related quality of life of patients as well as caregivers. Hence, training or educational programme for caregivers is essential, which reduce stroke costs and improves patient and caregivers outcomes.(**Sandak B A, 2012).**

1.1 BACKGROUND OF THE STUDY

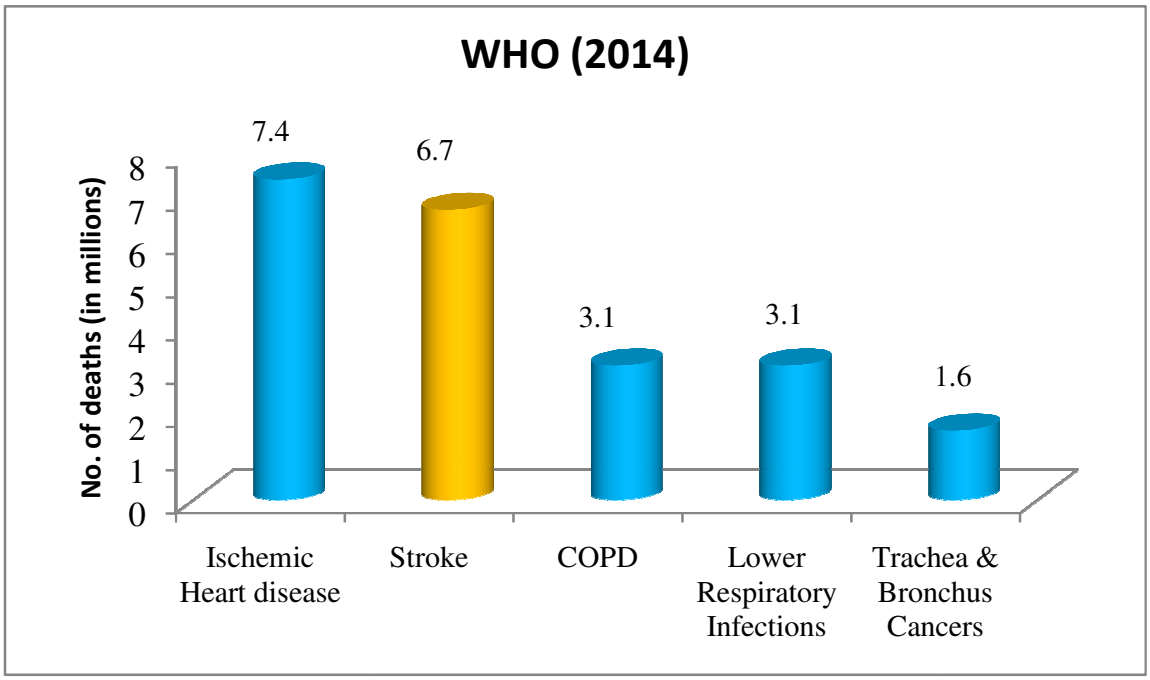


Fig: 1.1.1-The 5 leading causes of deaths in the world wide 2014

Globally, non communicable diseases were responsible for two-thirds of all deaths. Among that, stroke is the 2nd leading cause of death. The following chronic diseases have remained the top major killers **(WHO Report, 2014).** It was estimated that stroke accounted for 0.9% to 4.5% of total medical admissions and 9.2%-30% of admission to neurological wards. **(Dalal, 2008)**

Stroke rehabilitation program helps the patient to relearn the skills lost. Participating in stroke rehabilitation helps the patient to regain independence and improve their quality of life. Care givers play an important role in providing living arrangements and re train the general living skills of patient with stroke.

The World Stroke Organization (WSO) 2013, started urgent action to address the silent stroke epidemic by launching the "1 in 6" campaign on World Stroke Day, 29

October 2012.This campaign aims to reduce the burden of stroke by acting on six easy challenges:

- Know your personal risk factors: high blood pressure, diabetes, and high blood cholesterol.
- Be physically active and exercise regularly.
- Avoid obesity by keeping to a healthy diet.
- Limit alcohol consumption.
- Avoid cigarette smoke. If you smoke, seek help to stop now.
- Learn to recognize the warning signs of a stroke and how to take action.

Stroke is the 4th leading cause of death and also serious long-term disability for Americans. It kills almost 130,000 people each year. On average, one person dies from stroke every 4 minutes. Every year, more than 795,000 people suffers from stroke. About 610,000 of these experience strokes for the 1st time and about 185,000 strokes have a previous history of stroke. About 87% of all strokes are ischemic strokes. Stroke costs the United States an estimated loss of $36.5 billion amount each year. **(Center for Disease Control and Prevention, USA, 2009)**

Stroke is the 3rd leading cause of death in Canada. Six percent of all deaths are due to stroke. Each year, 50,000 Canadians die from stroke. That's one stroke per every 10 minutes, more women than men die from stroke. (**Canadian Stroke Network, 2011**).

Annually, 20 million people worldwide suffer a stroke, of these five million die and another five million are permanently disabled, with long term problems including physical pain, weakness or paralysis, difficulties with speaking, reading or writing, eyesight problems may be experienced, as well as memory loss and an inability to concentrate. Some stroke sufferers have emotional problems, such as depression, anger, anxiety, sadness and lack of confidence. Caring for somebody who is recovering from a stroke can be physically and emotionally draining. **(European Brain Council, 2013)**

Table:1.1.1- The prevalence, incidence, distribution and disability rates of strokes in global and Indian scenario

Stoke Aspects	Global Scenario	Indian Scenario
Prevalence	400-800 per 100,000	55.6 per 100,000
Deaths	5.7 million	0.63 million
New acute strokes	15 million /year	1.44-1.64 million/year
DALYs (disability adjusted life year)	28,5000,000	6,398,000
28-30 day case fatality rate	17-35%	18-41%

[South Asia Network for Chronic Disease (2011)]

The above table 1.1.1 by South Asia Network For Chronic Disease (2011) depicts the prevalence, incidence, distribution and disability rates of strokes in global and Indian scenario and also stated that stroke is a life changing event that affects not only the person who may be disabled, but their family and caregivers.

India is silently witnessing a stroke epidemic. There is an urgent need to develop a national program towards "Fighting Stroke". Through the opinion of stroke clinicians tapping the clinical expertise available from existing pool of non-neurologist physicians who can be trained and certified in stroke medicine (Strokology), to develop a national network of training and research in Strokology and motivate the national policy makers to quickly develop an "Indian Fight Stroke Program**". (Indian Academy of Neurology, 2010)**

Non communicable diseases pose great health burden and presents enormous challenge for health and national economies. In India and other developing countries, rapid demographic, lifestyle and socioeconomic transitions have significantly contributed to the emergence of the stroke epidemic. The prevalence rate being 545.10 per 100000 and annual incidence rate of first-ever stroke at 145.30, overall 30-day case fatality being 41.08**%. [Stroke Epidemic in India (2013)]**

In Tamilnadu, stroke is reported as 540 per 1,00,000 people had in the age group 41-60 years. Disability arising out of a stroke, needs involvement of the family in providing rehabilitative care and physiotherapy showed excellent results."Stroke is preventable if only people take care of their own health and make some lifestyle alterations early on". About 80 per cent of the strokes are caused by hypertension and

diabetes, both of which are preventable. “If we postpone the onset of diabetes by 10 years, then, the onset of complications by another 10 years, the chances of strokes are less likely.” **Madras Neuro Trust, Chennai (2007)**

Madras Medical College, Chennai, Tamil Nadu (2012) conducted a descriptive, retrospective cross-sectional study among 150 stroke patients at Rajeev Gandhi Government General Hospital (RGGGH), Chennai. Only 33.3% were brought to the hospital within 6 hours, 90% had mild GCS score(≥13/15) , 76% and 18% had infarct and heamorrage. The result revealed that (22.2%) young females, type A personality (70.7%), tobacco (60.7%) and alcohol abuse(44.7%), systemic hypertension (60.7%), diabetes mellitus (33.3%), cardiac disorders (14%). The study concluded that type A personality was seen in large number of study subjects. Personal habits in males and chronic comorbid illness in females had a strong association with occurrence of stroke. A holistic approach encompassing public awareness, behavioral modification and comorbid medical illness management is the need of the hour.

“If the family is doing better, that helps the patient do better”. Caregivers were happier when caring for a family member who survived a more severe stroke. When a stroke is labeled mild, expectations are high and the issues are more subtle that can cause more frustration. Caregivers were less happy when caring for a stroke survivor who suffered from memory loss, depression and other mood, thinking or behavioral issues. So, training programme for caregivers is essential to reduce their burden **(American Heart Association 2014).**

1.2 SIGNIFICANCE AND NEED FOR THE STUDY

Stroke rehabilitation is a critical part of stroke recovery. The duration of rehabilitation depends on the type of stroke. Brain can continue to learn and re-learn new and old tasks for as long as you live. So it’s important to continue rehabilitation at home after completion of visits to the rehabilitation center. A successful outcome requires dedication, perseverance, great attitude and motivation during rehabilitation process**. (Vega Jose, 2013)**

The care givers are the back bone of the service provided to people affected by stroke. A care giver has to do a number of things to stroke patient, example- lifting, positioning, bathing, dressing, feeding, cooking, shopping, paying bills, giving medicines, providing emotional supports. Stroke patients and their caregivers have large gaps in stroke knowledge and have suboptimal personal health behaviors, thereby putting the patient at high risk for recurrent stroke. Education programmes are needed for closing these gaps in knowledge and personal health behaviors. (**Koenig KL, 2007)**

Maria Cheng (2013) conducted a meta analysis to explore incidence and risk factors of stroke, on 100 studies from 1990 to 2010 stroke patients across the world. The study founded the incidence of stroke has jumped by a quarter in people aged 20 to 64. Strokes are increasingly hitting younger people and associated with bulging waistlines, diabetes and high blood pressure. The study concluded that incidence of the crippling condition worldwide could double by 2030, there by becoming the 1st leading cause of death.

Tapas Kumar Banerjee (2010) conducted several population-based surveys to explore the prevalence and incidence of stroke in different parts of India. The study results revealed the prevalence rate of stroke is 250-350/100,000. The age-adjusted annual incidence rate was 105/100,000 in the urban community of Kolkata and 262/100,000 in a rural community of Bengal. The study concluded that hypertension was the most important risk factor. Stroke represented 1.2% of total deaths in India.

Jayaraj Durai Pandian, (2013), conducted a population based survey on stroke epidemiology and stroke care services in India. Stroke is one of the leading causes of death and disability in India. The total incidence rate is 119-145/100,000. Intra venous thrombolysis are commonly used in India. The study concluded that stroke rehabilitation is not well developed in India due to lack of personnel. As a first step the Government of India has started the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS). It is focuses on early diagnosis, management, public awareness at different levels of health care for all.

Radha Krishnan. **K** (**2007)** conducted a case control study to explore the risk factors of ischemic stroke patients among South Indian patients. The result revealed that stroke patients had a higher prevalence of smoking, higher systolic blood pressure and fasting blood glucose, metabolic syndrome and lower high density lipoprotein cholesterol. The study concluded that metabolic syndrome and smoking are associated with ischemic stroke. The study target population was adolescents and young adults for screening and prevention to reduce the burden of ischemic stroke in young adults.

Sasikala. S (2008) conducted a pre experimental study to evaluate the effectiveness of selected nursing intervention on knowledge and level of satisfaction among 30 clients with stroke admitted at stroke unit, Chennai. The study results revealed that there was a significant improvement in the level of knowledge and satisfaction on administration of selected nursing interventions. The overall mean knowledge score of pretest was 12.5 and in the post test was 24.93 and 25(83.33%) were highly satisfied with selected nursing interventions like range of motion exercises, information booklet on stroke and its rehabilitation measures.

Judy. J, (2012) conducted pre experimental study to assess effectiveness of selected nursing interventions on psychosocial health among 30 clients with stroke admitted at Chennai. The study results revealed that the overall mean score in pre test was 46.53 with S.D of 12.62 and post test was 72.03 with the S.D of 12.49, the mean difference was 25.50 and the calculated 't' value was $t=28.158$ at $p<0.001$. Hence, there is a significant difference between the pre and post test score of psychosocial health. The study concluded that there was an improvement in psychosocial health after the administration of selected nursing interventions.

Cobley CS, et al., (2012) conducted a qualitative study to explore patients and carers experiences of early supported discharge services after stroke among 27 stroke patients and 15 carers in the Nottinghamshire region. They had difficulties related to limited support in dealing with carer strain, lack of education and training of carers, inadequate provision and delivery of stroke related information. The study findings highlighted the need for early supported discharge teams to address information and support needs of patients and carers.

Cameron JI, et al., (2009) conducted a qualitative study to explore the support needs over time from the perspective of stroke caregivers, Health Care Practioners (HCP) and compare and contrast caregivers and HCPs perspective. The study conducted among 24 caregivers of stroke and 14 HCPs. The study results revealed that caregivers needs for support and providing support change across the stroke clients recovery path. The study concluded that addressing caregivers changing needs across the care continuum, implementing a family-centered model of care and providing 7-day per week inpatient rehabilitation were changes the service delivery and to better support caregivers.

Clarke DJ, et al., (2014) conducted randomised trial to evaluate implementation of the modified London Stroke Carer Training Course (LSCTC) among 38 stroke patients, 38 caregivers, 53 stroke unit staff. The LSCTC was a structured competency-based training programme designed to develop the knowledge and skills of carers. Caregivers were often invited to observe therapy but had few opportunities to develop knowledge and stroke-specific skills. The study concluded that LSCTC is to be practical in settings with short inpatient stays and more effective vehicle for introducing competency based caregiver training.

The evidences recommended from the above studies and clinical exposure during specialty postings, the investigator identified problems of improper stroke care such as bed sore, lack of communication, improper feeding technique, lack of early mobilization and depression due to high dependency level of patient which creates burden to the caregivers. Hence, the investigator felt that the organized plan of education may help to relieve these problems of stroke patient, reduce the caregivers burden and positively influence their quality of life. So, this made the investigator to conduct a research on post stroke rehabilitation module.

1.3 STATEMENT OF THE PROBLEM

A study to assess the effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients at Vijaya Health Center, Chennai.

1.4 OBJECTIVES

1. To assess and compare the pre & post test level of knowledge regarding post stroke rehabilitation module among the experimental and control group
2. To compare the pre & post test level of knowledge regarding post stroke rehabilitation module between the experimental and control group
3. To assess and compare the post test level of practice regarding post stroke rehabilitation module between the experimental and control group
4. To correlate the post test level of knowledge with practice regarding post stroke rehabilitation module in the experimental group and control group
5. To associate selected demographic variables with post test level of knowledge and practice score regarding post stroke rehabilitation module in the experimental group.

1.5 OPERATIONAL DEFINITIONS

1.5.1 Effectiveness

It refers to the outcome of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients and assessed using structured questionnaire and observational check list respectively with in the week.

1.5.2 Post stroke rehabilitation module

Rehabilitation module is a set of instructions and steps of procedures prepared by investigator for the care givers of patient with stroke

Set of instructions include:

A) Education: Lecture cum discussion with power point presentation on general information about stroke problems of improper post stroke care, diet, range of motion exercises, promoting communication skill, importance of personal hygiene for 20 minutes

B) Demonstration: Demonstration of procedures such as_

- Lifting and transferring,
- Positioning
- Back care
- Naso gastric tube feeding technique.

C) Reinforcement A booklet on overview of post stroke rehabilitation module.

1.5.3 Knowledge

It refers to the level of understanding of caregivers and ability to answer the questions regarding the post stroke rehabilitation assessed by using a structured knowledge questionnaire prepared by the investigator.

1.5.4 Practice

It refers to the utilization of post stroke rehabilitation module for stroke patients by the caregivers, which is evaluated using observational check list devised by the investigator.

1.5.5 Care givers of stroke patient

It refers to the family members (wife, husband, daughter, son) significant others (relatives, friends) who are staying with client for at least a week and taking care of the patient with stroke in the hospital.

1.6 ASSUMPTIONS

1. The care givers of stroke clients may have some knowledge on post stroke rehabilitation module
2. Post stroke rehabilitation module may improve knowledge and practice among care givers of stroke patients

1.7 NULL HYPOTHESES

NH_1: There is no significant difference in the pre and post test level of knowledge between the experimental and control group at $p<0.05$ level.

NH_2: There is no significant difference in the post test level of practice between the experimental and control group at $p<0.05$ level.

NH_3: There is no significant relationship between the post test level of knowledge and practice in the experimental group and control group at the level of $p<0.05$.

NH_4: There is no significant association of the selected demographic variables with the post test level of knowledge and practice in the experimental group at the level of $p<0.05$.

1.8 DELIMITATION

The study is delimited to a period of 4 weeks

1.9 CONCEPTUAL FRAME WORK:

A conceptual framework or model is made up of concepts that are mental image of phenomenon. These concepts are linked together to express their relationship between them.

The Conceptual framework used for this study was based on **J. W. Kenny's Open System Model.** The open system model enumerates various aspects of system and interaction. She formulated various theories based on management.

The investigator applied Kenny's Open System Model in order to assess the effectiveness post stroke rehabilitation module on knowledge and practice among caregivers .This involves interaction between the researcher and caregivers.

An open system continuously interacts with the environment. The interaction takes the form of information transfers into or out of the system boundary, depending on the discipline which defines the concept.

Open system theory is useful in breaking the whole process into sequential tasks to ensure goal realization. The three major aspects of the systems are:

a) Input
b) Throughput
c) Output

Input:

According to J.W. Kenny's input is a type of information and material that enters the systems from environment through its boundaries. In this study, it refers to pre assessment of demographic variables of the caregivers such as age in years, gender, marital status, type of family, occupation, relationship with patient, family monthly income, duration of care giving and also the pretest knowledge assessment regarding post stroke rehabilitation module among caregivers using structured knowledge questionnaire respectively.

Throughput:

Throughput is the process that occurs at some point between input and output process. In this study throughput refers to the transformation of material that is given to caregivers. Education through power point teaching it focuses on definition, risk factors, causes, clinical features, complications, importance of rehabilitation, diet, range of motion exercises, communication. Demonstration of lifting and transferring, back care, positioning, naso gastric tube feeding. Return demonstration of procedures one procedure by one caregiver caregivers in the gathered group per day and a booklet was issued which contains an overview of post stroke rehabilitation module for the experimental group. But in the control group the intervention package and booklet was given after the posttest assessment at the time of discharge.

Output:

Output is the expected outcome of the input by the process of throughput. In this study it refers to change in posttest assessment of level knowledge and practice among caregivers. The output is measured with structured questionnaire for knowledge assessment and observational checklist for practice assessment.

Feed back

In this study the feedback was considered as processing and maintaining the effectiveness analyses. The achievement of goal or need and it is indicated by positive outcome that is attainment of adequate knowledge and practice regarding post stroke rehabilitation module and negative outcome is indicated by the inadequate knowledge and practice regarding post stroke rehabilitation module which may be reinforced by further teaching. The feedback for the system depends on the output may be reinforcement or enhancement.

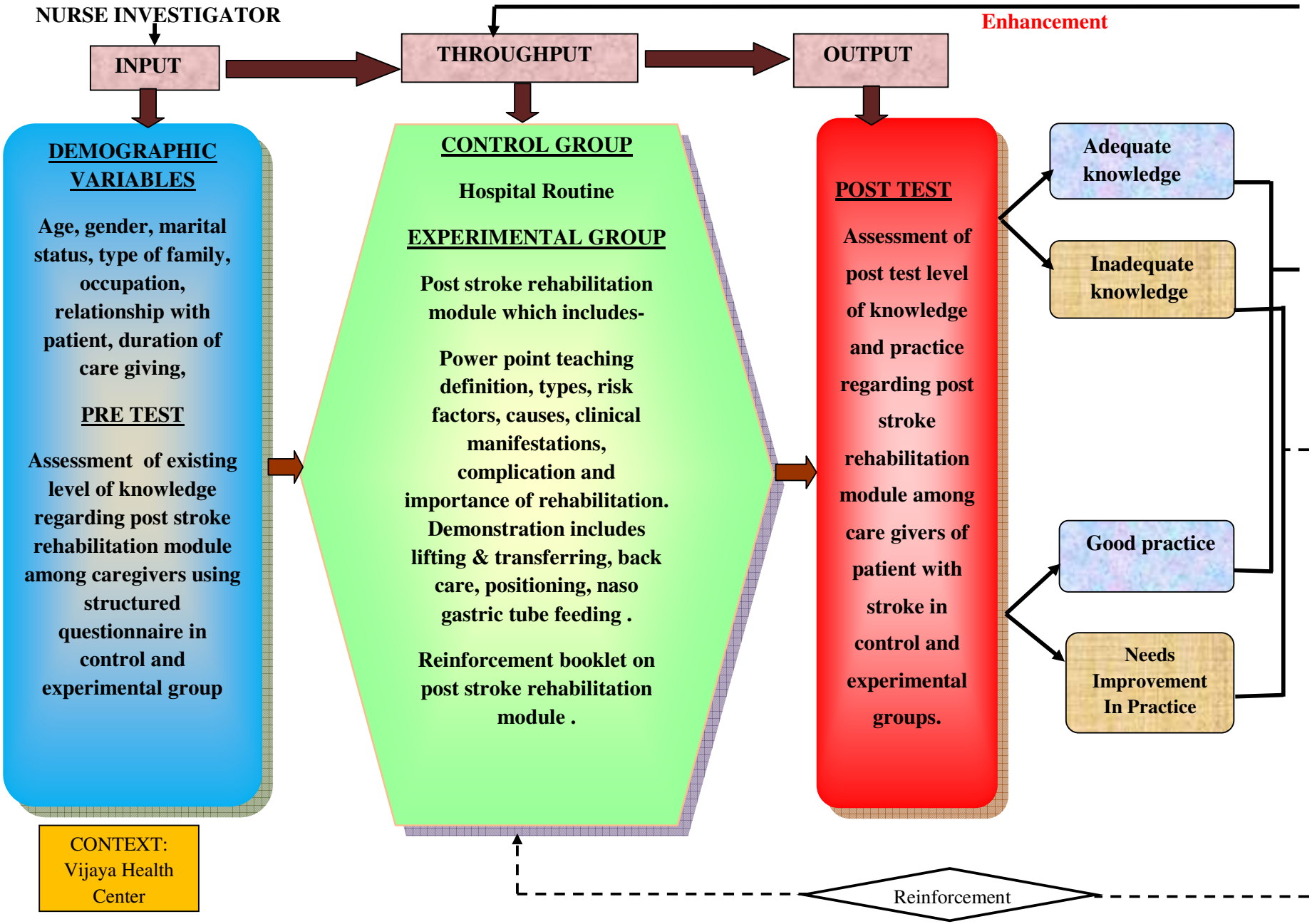


FIG.1.9.1: CONCEPTUAL FRAMEWORK BASED ON J.W.KENNY'S OPEN SYSTEM MODEL

1.10 OUTLINE OF THE REPORT

CHAPTER 1 : Deals with the back ground of the study, need for the study, statement of the problem, objectives, operational definitions, null hypotheses, assumptions, delimitations and conceptual frame work.

CHAPTER 2 : Focuses on review of literature related to the present study.

CHAPTER 3 : Enumerates the methodology of the study.

CHAPTER 4 : Presents the data analysis and data interpretation.

CHAPTER 5 : Deals with the discussion of the study

CHAPTER 6 : Gives the summary, conclusion, implications, recommendations and limitations of the study.

The study report ends with selected Bibliography and Appendices.

REVIEW OF LITERATURE

This chapter deals with the related literature review which aids to generate a picture of what is known and not known about a particular situation.

Review of literature is an organized critique of important scholarly literature which supports a study and a key step in research process **(Polit and Beck)**

An extensive review of literature was done by the investigator to gain an insight into the problem, collect maximum information from systematic and critical review of scholarly publications, unpublished scholarly print materials. The logical sequence of the chapter is organized in the following sections:

SECTION 2.1: Scientific reviews related to stroke
SECTION 2.2: Scientific reviews related to burden of caregivers and quality of life
SECTION 2.3: Scientific reviews related to effectiveness of caregivers training programme.

SECTION 2.1: SCIENTIFIC REVIEWS RELATED TO STROKE

Rosaria Renna, Fabio Pilato, Paolo Profice (2014) conducted a case control study to investigate risk factors and etiologies of stroke among 150 young adults admitted to the stroke unit. The results revealed that dyslipidemia (52.7%), smoking (47.3%), hypertension (39.3%), and patent foramen ovale (32.8%) accounted for stroke. Large-artery atherosclerosis (11.3%). Cardio embolism (24%), Small-vessel occlusion (8%), additional risk factors (27.3%), (29.3%) had undetermined etiology. The study concluded that traditional vascular risk factors are also very common in young adults with ischemic stroke, but such factors increase the susceptibility to be stroke dependent.

Doan QV, Brashear A, Gillard PJ (2012) conducted a multicenter open label study to evaluate the relationship between disability and Health Related Quality of Life (HRQOL) among 279 patients with upper limb post stroke spasticity and their caregivers burden. HRQOL and caregiver burden includes 4 problem domains such as hygiene, dressing, limb posture and pain. The results revealed that increased disability is

associated with HRQOL scores (P< .002).Caregiver burden significantly increased with increasing levels of disability (P ≤ .05). Caregiver assistance was required approximately 9.0-28.2 hours per week in the hygiene domain and 3.3-32.1 hours per week in the dressing domain. The study concluded that the patient with upper limb post stroke spasticity had increase disability and diminished HRQOL.

David C, Bettermann, Kerstin (2011) conducted a case control study to determine the causes for permanent disability among 180 stroke patients. The study result revealed that dysphagia, urinary incontinence, shoulder pain, spasticity, falls, and post stroke depression were accounted as major causes that needs caregivers support. The study concluded that stroke rehabilitation is an important part of the stroke continuum of care, which includes prevention, acute management, rehabilitation and secondary prevention.

Runchey S, Mc Gee S (2010) conducted a prospective study to determine the accuracy in distinguishing hemorrhagic stroke from ischemic stroke among 6,438 hemorrhage stroke patients. The results revealed that several findings significantly increase the probability of hemorrhagic stroke such as coma [CI], 3.2-12), neck stiffness (1.9-12.8), seizures accompanying the neurologic deficit (1.6-14), diastolic blood pressure greater than 110 mm Hg(1.4-14), vomiting(1.7-5.5), and headache(1.7-4.8).Other findings decrease the probability of hemorrhage such as cervical bruit (0.03-0.47) and prior transient ischemic attack (0.18-0.65).The study concluded that in patients with acute stroke, certain findings accurately increase or decrease the probability of intracranial hemorrhage and diagnostic certainty requires neuroimaging.

Shanmugham K, Cano MA, Elliott TR (2009) conducted a correlational, prospective study to examine the relationship between problem-solving abilities and satisfaction to caregiver depression at discharge from stroke rehabilitation center and after one month. The study conducted among 43 caregivers and results revealed that caregivers experienced a significant decrease in depression scores at discharge than 1-month later. The study concluded that dysfunctional problem-solving abilities and low relationship satisfaction are associated with caregiver depression. The study suggested that the development of problem-solving training programmes is essential for caregivers.

SECTION 2.2: SCIENTIFIC REVIEWS RELATED BURDEN OF CAREGIVERS AND QUALITY OF LIFE

Sreedharan S E, Unnikrishnan JP, Amal MG (2013) conducted a correlational study to determine the employment status and level of change of social functioning with the severity of stroke, functional disability, anxiety and depression scores among 150 stroke survivors and their caregivers at South India. The study results revealed that spouse was the principal caregiver for 142/150 (94.6%), the pre-stroke employment status of 62.7%, only 20.7% were employed post stroke but caregiver was not reduced post-stroke (34.7% Vs 33.3%). The study concluded that loss of occupation among stroke survivors is high. Functional disability contributed to employment loss and social function decline among stroke survivors, it did not have a significant impact on caregiver burden.

Patricia Brigida, Luis MT, Jesus, Madetine Cruice (2013) conducted a systematic review to identify the factors associated with the quality of life (QOL) of the caregivers of people with aphasia (PWA). Nine studies including PWA's caregivers were identified. They reported life changes such as: loss of freedom; social isolation, new responsibilities, anxiety, emotional loneliness, need for support, changes in social relationships, increased burden and need for support and respite.

Yu, Yunhong, Hu, Jie, Efird, Jimmy T Mc Coy (2013) conducted a cross-sectional, descriptive, correlational study to examine the relationships of social support and coping strategies to health-related quality of life among 121 caregivers of stroke in China. The study result revealed that higher educational level, planning and active coping were positively associated with health-related quality of life. The number of chronic conditions, hours of care per day and functional dependence of the survivor were negatively related to quality of life. The study concluded that active coping strategies predicted better health-related quality of life. Findings suggested that intervention programme should be developed to enhance caregivers of stroke survivors coping skills and improve social support for these caregivers.

Leahy M, Desmond D, Coughlan T (2012) conducted phenomenological study to explore the experience of stroke among 12 young women in Ireland. Semi-structured interviews were conducted to collect the information. Four super-ordinate themes were

identified stroke as an illness of later life, post-stroke selves, a desire for peer support and the impact of stroke on relationships. Findings indicate the importance of addressing the specific needs of younger stroke patients from admission to recovery through provision of inclusive all-age acute stroke services with customized rehabilitation.

Kamel, Andaleeb Abu, Bond (2012) conducted a cross sectional study to investigate the relationship between patients characteristics, duration of care giving, daily care giving time, caregivers characteristics, caregiver depression and burden among 116 caregivers of patients with stroke. The study results revealed that caregivers health, receiving professional home health care and caregivers burden were related to caregiver depression. Functional disabilities of patients with stroke and depression of caregivers were related to caregiver burden. The study concluded that to decrease caregiver depression and burden, nurses must provide caregivers with instructions for home management of patients with stroke and development of specialized stroke home health services.

Das, Sujata, Hazra (2010) conducted a cross sectional study to assess significant causes of stress among 199 caregivers of stroke patients. The result revealed that increased workload related anxiety, depression and sleep disturbance were reported by 70%, 76%, and 43% respectively, whereas >80% reported financial worry, which was greater among slum dwellers and less educated families. The study concluded that financial stress was prominent and common among the socioeconomically weaker section.

Visser Meily A.M, Schepers. V (2008) conducted a prospective study to identify the early predictors of spouses quality of life among 187 caregivers of stroke. In the beginning of rehabilitation caregiver characteristics, psychological factors, harmony in the relationship and social support were assessed. One year after stroke, caregiver burden, life satisfaction and depressive symptoms were assessed. The study results revealed that 80% of the spouses reported low quality of life, 52% reported depressive symptoms, 54% significant strain and only 50% was satisfied with life as a whole. The study suggested that caregivers at risk should be identified earlier to rehabilitation by means of coping measurement instruments or selected anamneses on coping.

SECTION 2.3: SCIENTIFIC REVIEWS RELATED TO EFFECTIVENESS OF CAREGIVERS TRAINING PROGRAMMES

Pinedo S, Zaldibar B, Sanmartin V (2014) conducted a Prospective longitudinal cohort multicenter study to determine the effectiveness of the rehabilitation treatment, satisfaction and discharge destination among 241 stroke patients and 119 caregivers of stroke. The results revealed that almost all (96.6%) were satisfied with the treatment, (80.3%) had satisfaction, (81.7%) home was the discharge destination of the patients. The study concluded that patients admitted for stroke rehabilitation achieve significant functional gain during hospitalization and return to their homes in most cases. The training of the caregiver is an essential aspect that needs improves the knowledge of caregivers.

Cameron JI, Naglie G, Gignac MA (2014) conducted a multi-site randomized controlled trial to determine the effectiveness of Timing It Right Stroke Family Support Programme (TIRSFSP) among 300 family caregivers of stroke survivors. Participants were selected randomly and allotted to TIRSFSP guided by a health care professional, caregiver self-directed with an initial introduction to the program, standard care receiving the educational resource. Participants were assessed 3, 6 and 12-months psychological well-being, knowledge and mastery. Qualitative methods was also used to obtain information. The result revealed that TIRSFSP benefits family caregivers by improving their perception of being supported and emotional well-being and recommended as a model of stroke family education and support.

Mohd Nordin NA, Aziz NA, Abdul Aziz AF (2014) conducted qualitative study to explore the perception of long term stroke rehabilitation services and potential approaches among 15 rehabilitation professionals and 8 long term survivors. The study results revealed that people with stroke benefited more from rehabilitation compared to the amount of rehabilitation services presently provided. The study findings concluded that establishment of community-based stroke rehabilitation centers and training family members to conduct home-based therapy are two potential strategies to enable the continuation of rehabilitation for long term stroke survivors.

Pierce, Linda L, Steiner (2013) conducted a descriptive study to assess the usage and design of the stroke education /support caring web site among 36 family caregivers of persons with stroke. The study results revealed that participants logged on to the Web site 1-2 hours per week, although usage declined after several months. Participants positively rated the Web site's appearance and usability. The study concluded that Website's designers can replicate this intervention for other health conditions.

Forster A, Dickerson J, Young J (2013) conducted a pragmatic, multicentre, cluster randomized controlled trial to determine effectiveness of structured, competency-based training programme for caregivers of stroke and cost effectiveness of training programme among 930 stroke patient. The intervention comprised a number of caregiver training sessions. The primary outcomes includes Activity of Daily Living (ADL) and caregiver burden measured at 6 months. Secondary outcomes included quality of life, mood and cost-effectiveness at 12 months. The study concluded that there was no difference between the intervention and usual care with respect to improving stroke patients recovery, reducing caregivers burden or improving other physical and psychological outcomes, nor was it cost-effective compared with usual care.

Forster A, Brown L, Smith J (2012) conducted meta analysis to assess the effectiveness of information provision strategies in improving the outcome of stroke among 2289 stroke patients and 1290 caregivers. Analyses showed that active information had a significantly greater effect than passive information on patient mood but not on other outcomes. The study evidence showed that information improves patient and carer knowledge of stroke, aspects of patient satisfaction, and reduces patient depression scores. The strategies were actively relating patients, carers and also include planned follow-up for clarification and reinforcement have a greater effect on patient mood.

Vluggen TP, Van Haastregt JC, Verbunt JA (2012) conducted a randomised controlled trial to evaluate the effectiveness and feasibility of a new multidisciplinary trans mural rehabilitation programme among older strokes. The programme consists of three care modules such as neuro rehabilitation treatment, empowerment training and stroke education. Modules administered for 2-6 months. Primary outcomes for patients

are activity level after stroke, functional dependence, perceived quality of life and social participation. Outcomes for informal caregivers are perceived care burden, quality of life and perceived health. The study concluded that utilization of three modules were effective on quality of life of patients and caregivers.

Wiles R, Pain H, Buckland S, Mc Lellan L (2012) conducted a qualitative interview to identify the information needs of patients and their carers among 31 interviewees. The study conducted at three different points of post-stroke such as during hospitalization, after 1 month of discharge and 2-12 months of discharge. Recovery, treatment, prognosis, practical caring tasks, social activities and resources available in the community was identified as needs of information. It findings highlighted that the study facilitate improved information provision. It is anticipated that the process of providing such packages would improve communication within the rehabilitation team.

Johnson T, Wild C (2011) conducted observational study to assess effectiveness of tele-rehabilitation interventions in stroke care. Four studies had been carried out in the USA, two in the Netherlands, two in Italy and one in China. There were four randomized controlled trials and one qualitative analysis. The study concluded that home-based tele-rehabilitation interventions showed promising results in improving the health of stroke patients and in supporting caregivers. Health professionals and participants reported high levels of satisfaction and acceptance of tele-rehabilitation interventions. There was no evidence regarding the effects on resource utilization or cost-effectiveness. Most studies showed promising results, although overall, the quality of the evidence on telerehabilitation in post-stroke care was low.

Tan WS, Chong WF, Chua KS (2010) conducted a retrospective cohort study to determine factors associated with delays in discharge among 487 stroke patients for an year at inpatient rehabilitation centre in Singapore. There were a total of 172 delayed discharges (35.6%), caregiver related reasons were (79.7%), organizational factor was investigations and specialist appointments (17.4%). This study suggested that caregiver and organizational factors were main contributors of delayed discharge. Targeted caregiver training may improve the confidence of caregivers, so, the use of structured discharge planning programmes may improve the efficiency of the rehabilitation service,

to reduce delays, problems with the supply of formal and informal post-discharge care must also be addressed.

Eames S, Hoffmann T, Worrall L (2010) conducted qualitative study to identify perceived barriers in accessing and understanding information about stroke among 60 patients and their caregivers. The results revealed that 3 categories of barriers were identified such as limited availability and suitability of information, barriers in the hospital environment and patient and carer barriers. The study concluded health professionals coordinate and present stroke information to patients and carers. Addressing these barriers may enhance patients and carers access to, understanding of, and satisfaction with information about stroke.

Marsden D, Quinn R, Pond N (2010) conducted randomized, assessor blind, cross-over, controlled trial to explore effectiveness of group programme for community-dwelling chronic stroke among 25 stroke survivors and 17 carers in Australia. The intervention was physical activity, education, self-management. The results revealed that among seven sessions all participants attended four or more and 88% attended six or seven sessions. The study concluded that this novel programme incorporating physical activity, education and social interaction proved feasible to undertake by a stroke-specific multidisciplinary team. This programme may improve and maintain health-related quality of life and physical functioning for chronic stroke survivors and their carers and warrants further investigation.

Oupra R, Griffiths R, Prayor J, Mott S (2010) conducted a non-randomised comparative study to evaluate the effect of the supportive educative learning programme (SELF) programme on family caregivers strain and quality of life among 140 patients and caregivers in Thailand.70 patients/caregiver pair in each group, nurse led SELF programme administered in interventional group. The results revealed that family caregivers in the intervention group had a significantly better quality of life (at discharge $t = 2.82$, d.f. = 138, $P = 0.006$ and at 3 months $t = 6.80$, d.f. = 135, $P < 0.001$) and they also reported less strain (at discharge $t = 6.73$, d.f. = 138, $P < 0.001$; and at 3 months $t = 7.67$, d.f. = 135, $P < 0.001$). This research demonstrated that providing education and support to the family caregiver of stroke survivors can reduce caregiver strain and enhance their quality of life.

Shyu, Yea-Ing L, Kuo (2010) conducted a randomized experimental study to explore the long-term effects of a discharge-preparation programme among 158 (72 in experimental and 86 in control groups) older stroke patients and their caregivers by administering caregiver oriented intervention programme in interventional group. The study results was caregivers in the experimental group provided significantly better quality of care (0.45; p = 0.03) than the control group. The study concluded that intervention programme succeeded in improving quality of care provided by family caregivers to older patients with stroke and in decreasing the likelihood of their institutionalization.

Smith J, Forster A, Young J (2009) conducted a meta analysis to assess effect of stroke intervention on knowledge, mood, satisfaction and mortality among stroke patient and their caregivers. The results revealed that there were significant effects in favour of the intervention on patient knowledge (CI 0.12 to 0.46), caregiver knowledge (CI 0.06 to 1.43), patient depression (CI -0.93 to -0.10) and patient satisfaction (CI 1.33 to 3.23). Strategies which actively involve had significant greater effect on patient anxiety and depression than passive strategies. The study concluded that strategies which actively involve patients and caregivers should be used in routine practice.

Louie SW, Liu PK, Man DW (2008) conducted a quasi-experimental study to explore the effectiveness of stroke educational group on increasing the stroke-related knowledge and perceived health status among 54 stroke patients and 32 caregivers. The educational group has been proposed as an effective way to deliver a program based on structured stroke knowledge to enhance emotional support. The results showed a statistically significant increase in stroke-related knowledge in the patients (F [1,51]=7.28-9.67, P<0.01) and their caregivers (F [1,30]=44.19-80.49, P<0.01), but no similar significant improvement was noted on perceived health status and care-giving stress. The study concluded that, there was an improvement in the acquisition of stroke-related knowledge by both patients with stroke, and their caregivers, after a stroke educational group.

Lee, JuHee, Soeken (2008) conducted a meta analysis to examine the effectiveness of the selected interventions for improving mental health among 718 caregivers of stroke patient. The study results revealed that the intervention was effective

in improving the mental health of informal stroke caregivers. The mean weighted effect size (MWES) for the education program was 0.354 (Z = 2.613, p < .01) and for the support program was .234 (Z = 2.335, p = .02). The MWES for the Europe study was 219 (Z = 2.613, p < .01) and for the United States was .922 (Z = 3.287, p = .001). The results showed that overall interventions improved mental health of informal stroke caregivers

Louie, Stephen (2008) conducted a quasi experimental study to explore whether the stroke educational group could increase stroke-related knowledge among 54 stroke patients and 32 of their caregivers. Intervention administered during the 1-week, 2-week and 1-month follow-up sessions. The study results revealed that statistically significant increase in stroke-related knowledge in the patients (7.28-9.67, P<0.01) and their caregivers (44.19-80.49, P<0.01).The study concluded that there was an improvement in the acquisition of stroke-related knowledge by both patients with stroke, and their caregivers, after a stroke educational group.

Smith J, Forster A, Young J (2007) conducted a randomized controlled trial to evaluate the effectiveness of an stroke education programme among 170 stroke patients and 97 carers. The intervention group received a stroke information manual and invited to attend education meetings every two weeks with multidisciplinary team. The result revealed that there was no statistical evidence for a treatment effect on knowledge but associated with a significantly greater reduction in patient anxiety score in three months (p =0.034) and six months (p =0.021). The study concluded that an education programme delivered within a stroke unit was not effective on knowledge about stroke but there was a significant reduction in patient anxiety.

RESEARCH METHODOLOGY

Methodology of research organizes all the components of study in a way that most likely will lead to valid answers for the problems that have been posted. **(Burns and Goove, 2008)**

This chapter describes the methodology adopted in this study to assess the effectiveness of post stroke rehabilitation module on knowledge and practice among caregivers of stroke patients at Vijaya Health Centre, Chennai. This includes research design, variables, setting of the study, population, sample, criteria for sample selection, **s**ample size, sampling technique, development and description of the tool, scoring key, content validity, pilot study, reliability, and procedure for data collection and plan for data analysis.

3.1 RESEARCH APPROACH

The research approach used for this study was quantitative research approach.

3.2 RESEARCH DESIGN

The research design used for this study was quasi experimental two group pretest and post test design.

<table>
<tr><th>Group</th><th>Pre test (O_1)</th><th>Intervention (X)
(on the day of pretest)</th><th>Post test (O_2)
(At the end of 7th day.)</th></tr>
<tr><td>Control Group</td><td rowspan="2">Assessment of existing level of knowledge regarding post stroke rehabilitation among care givers using structured questionnaire</td><td>Hospital routine</td><td rowspan="2">Assessment of level of knowledge & practice regarding post stroke rehabilitation using structured questionnaire and observational check list respectively.</td></tr>
<tr><td>Experimental Group</td><td>Post stroke rehabilitation module through power point teaching, demonstration and reinforcement booklet given to the caregivers.</td></tr>
</table>

3.3 VARIABLES

3.3.1 Independent Variable

The independent variable in the study was post stroke rehabilitation module.

3.3.2 Dependent Variable

The dependent variable in the study was knowledge and practice of the caregivers.

3.3.3 Extraneous Variables

Age in years, gender, education, marital status, type of family, occupation, relationship with patient, family monthly income, duration of care giving, previous exposure to information on stroke rehabilitation.

3.4 SETTING OF THE STUDY

The study was conducted at Vijaya Health Center, Chennai. It is a 350 beded multi specialty hospital with neurology being a major speciality. The various units under the neurology department are Neuro, Stroke, Step down ICU.

3.5 POPULATION

3.5.1 Target Population .

The target population consisted of all caregivers of clients with stroke

3.5.2 Accessible Population

All caregivers of stroke clients, who were staying with client admitted at Vijaya Health Centre found the accessible population. Approximately 70-90 clients with stroke are admitted every month.

3.6 SAMPLE

The care givers of stroke patients who were staying with the clients and who fulfilled and the inclusive criteria

3.7 SAMPLE SIZE

Sample size consists of 30 care givers each in the experimental and control group.

3.8 CRITERIA FOR SAMPLE SELECTION

3.8.1 Inclusion Criteria: Caregivers

1. Who were in the age group of 30-60 years
2. Who were staying for atleast one week with the patients, admitted for the management of stroke
3. Who care for client with hemiplegia, dysphasia and on nasogastric tube feeding
4. Who were willing to participate in the study
5. Who can read and write either of English, Telugu and Tamil.

3.8.2 Exclusion Criteria: Caregivers

1. who have physical disability and severe sensory deprivation
2. who have attended any training programme on post stroke rehabilitation

3.9 SAMPLING TECHNIQUE:

Non probability purposive sampling technique was used by taking 4 to 5 samples per day based on availability from which 30 care givers were allotted in the control & 30 in the experimental group.

3.10 DEVELOPMENT AND DESCRIPTION OF TOOL

After an extensive review of literature, content validity, discussion with experts and with the investigators personal and professional experience, a structured questionnaire was developed by the investigator to assess the level of knowledge and an observational checklist was formulated by the investigator to assess the practice regarding post stroke rehabilitation module.

The tool constructed for the data collection consisted of two parts:

3.10.1 Part A: Data Collection Tool

This part consisted of three sections

Section-A: Assessment of demographic variables

Personal data sheet was used to collect the demographic characteristics, consists of variables like age in years, gender, education, marital status, type of family, occupation, relationship with patient, family monthly income, duration of care giving, previous exposure to information on stroke rehabilitation.

Section-B: Knowledge

It consists of self administered structured questionnaire, comprising 30 questions, formulated under separate subheadings to assess the knowledge of caregivers regarding post stroke rehabilitation module. The questions were segregated as follows

S.NO.	CONTENT	NO. OF QUESTIONS
1.	General information of stroke rehabilitation	7
2.	Diet	4
3.	Range of motion exercises	4
4.	Communication	4
5	Lifting and transferring	4
6	Hygiene and positioning	3
7	Naso gastric tube feeding	4
Total		**30**

Scoring key

The self administered structured questionnaire consists of multiple choice questions having only one correct answer. Hence each correct answer will be given '1' mark, and wrong answer will be given '0' mark. Thus totaling maximum of 30 marks to interpret the level of knowledge. The raw score was converted to percentage to interpret the level of knowledge. The level of knowledge was categorized as

Level of knowledge:

≤50%	Inadequate level of knowledge
51-75%	Moderately adequate level of knowledge
>75%	Adequate level of knowledge

Section- C: Observational Checklist

An observational checklist was used to assess the post test level of practice regarding the post stroke rehabilitation module among caregivers which was formulated by the investigator.

S.NO.	ITEMS	NO. OF ITEMS
1	Daily observation	1
2	Lifting & transferring	10
3	Positioning	7
4	Back care	7
5	Naso gastric tube feeding technique	10
TOTAL		**35**

Scoring key:

The items are rated as 1 for "Yes", 0 for "No"and 0. The raw score was converted to percentage to interpret level of practice

Maximum score-35

Minimum Score- 0

SCORE	LEVEL OF PRACTICE
≤50	Needs improvement in practice
51-75%	Fair practice
>75%	Good practice

3.10.2 Part B: Intervention Protocol

Intervention protocol consisted of training programme, which has a specific teaching programme structured by the investigator using power point and booklets to change the knowledge regarding the post stroke rehabilitation module and was administered once after pretest for a time duration of 15 minutes.

a) **Knowledge:** Education through power point teaching, lecture cum discussion and the content focus on

- Definition of stroke
- Incidence, types, causes.
- Clinical manifestations and complications

- Management and rehabilitation
    - Diet
    - Range of motion exercises
    - Communication

b) Practice : demonstration of procedures such as _

- Lifting and transferring
- Back care
- Positioning
- Naso gastric tube feeding

c) Reinforcement: A booklet on overview of post stroke rehabilitation module.

3.11 CONTENT VALIDITY:

The content validity of the data collection tool and intervention protocol was ascertained from the expert's opinion in the following field of expertise.

Neurologist	-1
Physiatrist	-1
Medical surgical Nursing experts	-4

Modifications were made in the tool as per the expert's suggestions. All the experts had their consensus and then the tool was finalized. Experts suggest modifying the questions in to seven divisions and also asked to modify the check list options in to three.

3.12 ETHICAL CONSIDERATIONS:

Ethics is a system of moral values that is concerned with the degree to which research procedures adhere to the professional, legal, and social obligations to the study participants.

The research study was approved in **Institutional Ethics Review Board (IERB)** held on February 2013 by the **International centre for collaborative research (ICCR)** committee, Omayal Achi College of Nursing. The ethical principle followed in the study were

A) BENEFICIENCE:

The investigator followed the fundamental ethical principle of beneficence (Doing well) adhering to

a) The right to freedom from harm and discomfort

The study was beneficial for the samples as it enhanced their knowledge about post stroke rehabilitation and improved their practice while taking care of stroke patients

b) The right to protection from exploitation:

The investigator explained the procedure and nature of the study to samples and ensured that none of the samples in both experimental group and control group were exploited or denied.

B) RESPECT FOR HUMAN DIGNITY:

The investigator followed the second ethical principle of respect for human dignity. It includes the right to self determination and right to self disclosure.

a) The right to self determination

The investigator gave full freedom to the participants to decide voluntarily whether to participate in the study or to withdraw from the study and the right to ask questions.

b) The right to full disclosure.

The researcher has fully described the nature of the study, the person's right to refuse participation and researcher's responsibilities based on which both oral and written informed consent was obtained from the participants.

C) JUSTICE:

The researcher adhered to the third ethical principle of justice. It includes samples right to fair treatment and right to privacy.

a) Right to fair treatment

The researcher selected the study participants based on the research requirements. The investigator obtained the rules and regulations of the Institutional Ethical Committee (ICCR).

b) Right to privacy

The researcher maintained the participant's privacy throughout the study without revealed the scores to the caregivers.

D) CONFIDENTIALITY

The researcher maintained confidentiality of the data provided by the study participants. The researcher didn't reveal any scores to the caregivers while they asked about the scores. The researcher clearly explained to the samples that the data will be used for analysis only.

3.13 RELIABILITY OF THE TOOL

The reliability of the tool was established by test-retest method for knowledge questionnaire and inter rater method for the practice to assess the observational checklist regarding post stroke rehabilitation module. The reliability score was **r=0.86** and **r=0.86** respectively using **Karl Pearson's Correlation**. The 'r' value indicated that there was a high positive correlation. Hence, the tool was reliable for the researcher to continue the main study in future.

3.14 PILOT STUDY

The pilot study is the trial run for major study. It was conducted at Vijaya Health Center, Vadapalani, after obtaining ethical clearance from ICCR and formal written permission was sought from the Principal of Omayal Achi College of Nursing, Chief Medical Officer, General Manager, Neurologist and Nursing Superintendent of Vijaya Health Centre, Vadapalani, Chennai. The data collection was done in the month of June from 10/6/13 to16 /6/13.

A total of 10 caregivers who fulfilled the inclusive criteria for sample selection were selected using purposive sampling technique. The investigator selected 5 caregivers from the neuro ward as the control group, followed by 5 caregivers from stroke ward as the experimental group.

The caregivers in the in control group were seated comfortably in a well ventilated room. A brief explanation about self and study was given to the caregivers. After obtaining written consent from caregivers, data collection commenced. The pre test level of knowledge was done using self administered structured questionnaire. It took around 15 minutes to answer all the questions. The hospital routines was continued for the control group, from the same day onwards, the practice was observed for seven days by non participant observation method. After seven days the post test level of knowledge

and practice of the caregivers was assessed using the structured questionnaire and observational checklist respectively.

The initial formalities were carried out for the caregivers in the experimental group selected from the stroke ward. After the pre test assessment, on the same day, the investigator given power point teaching about stroke and overview of stroke rehabilitation. The booklet regarding post stroke rehabilitation module was issued to the care givers. Demonstration of procedures like lifting and transferring, back care, naso gastric tube feeding and 4 different types of positions were demonstrated simultaneously after completion of each procedure. The intervention session took about 1 hour 30 minutes to complete, during the pilot study the investigator found difficulty to assess the skill of caregivers. The skill was changed as practice from the opinion of experts, from the next day onwards, the practice was observed for seven days by non participant observation method. At the end of one week, post test assessment was done.

The analysis of the pilot study revealed that the un paired 't' value to determine the effectiveness of post stroke rehabilitation module on level of knowledge was 11.05 and on level of practice was 6.92, which showed high statistical significance at $p<0.01$. The results of the pilot study gave the evidence that the knowledge questionnaire, observational check list and post stroke rehabilitation module was reliable, feasible and practicable to implement in the main study.

3.15 DATA COLLECTION PROCEDURE

The data collection for the main study was done for a period of four weeks at Vijaya Health Center, Chennai. A formal written permission was obtained from the Principal, Omayal Achi College of Nursing, ethical clearence from the ICCR and the Chief Medical Officer, General Manager, Neurologist, Nursing Superintendent and ward incharges of Stroke, Neuro wards and Step down ICU of Vijaya Health Centre, Vadapalani, Chennai.

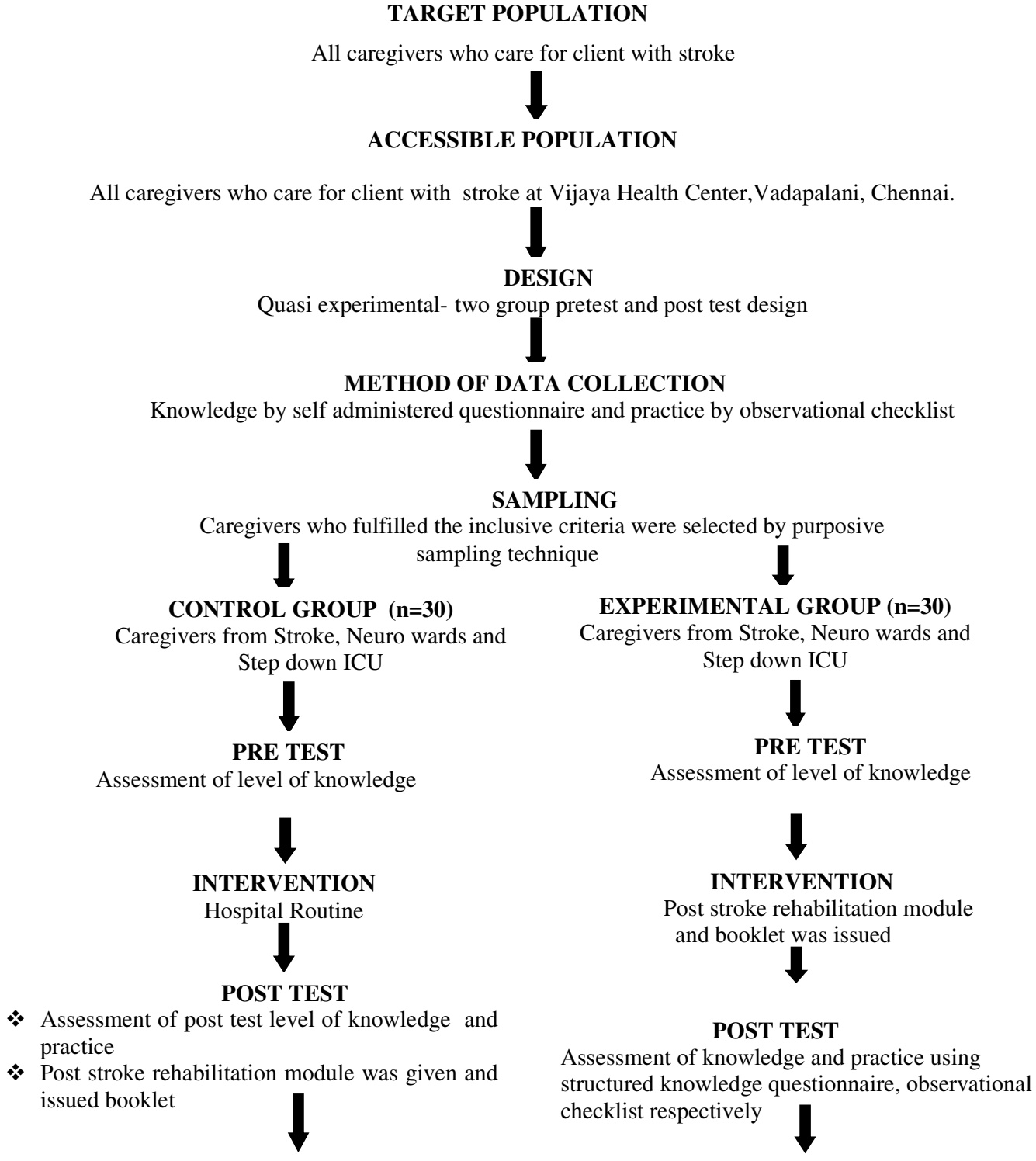
A total of 60 caregivers who fulfilled the inclusion criteria for sample selection were selected using purposive sampling technique. The investigator selected 30 caregivers each in the control and experimental group, based on availability 4-5 samples were taken per day from these wards (Stroke, Neuro wards and Step down ICU).

The caregivers were gathered and seated in a room with adequately ventilated and a brief introduction of self and explanation on the purpose of the study was given. The written informed consent from the caregivers for data collection was obtained and they were reassured of the confidentiality of the responses.

Firstly, The researcher selected 30 samples in the control group, After giving brief introduction and explanation to the samples on how to answer the questions following which pre test level of knowledge was assessed using self administered structured questionnaire. It took around 15 minutes to answer questionnaire. The hospital routine was carried out, from the same day, the practice was observed for seven days by non participant observation method. After seven days the post test level of knowledge and practice of the caregivers were assessed using the structured questionnaire and observational checklist. Investigator obtained help from the research assistance whose doing M.sc (Neuroscience Nursing) to assess the level of practice of caregivers on the basis of 2 samples by each. Investigator gave clear idea to the research assistance about post stroke rehabilitation module and tools. Reliability was checked by inter rater method and found to be reliable. With that the study was concluded in the control group.

The initial formalities were carried out for the caregivers in the experimental group. After the pre test, a power point teaching was done through lecture cum discussion method for 20 minutes and booklet on post stroke rehabilitation module was given to the care givers as reinforcement. Procedures were demonstrated like lifting and transferring, back care, naso gastric tube feeding (15, 20, 15 minutes) respectively and 4 different types of positions were demonstrated (5 minutes each) simultaneously after completion of each procedure. The intervention session took about 1 hour 30 minutes to complete. Return demonstration was taken on the same day from 4-5 caregivers, one procedure by one caregiver. Then the practice of the experimental group was also assessed for seven days. At the end of one week, post test was conducted by investigator with the help of research assistant

SCHEMATIC REPRESENTATION FOR RESEARCH METHODOLOGY



3.16 PLAN FOR DATA ANALYSIS

The data was analyzed by descriptive and inferential statistics.

Descriptive Statistics

1. Frequency and percentage distribution was used to analyze the demographic variables.
2. Mean and standard deviation was used to assess the pre and post test level of knowledge regarding post stroke rehabilitation module among the caregivers of stroke patients.

Inferential Statistics

1. Paired “t” test was used to compare the pre test and post test level of knowledge among the experimental and control group.
2. Unpaired “t” test was used to compare the pre test and post test level of knowledge between the groups and also to compare post test level of practice between the groups.
3. Correlation coefficient to find out the relation between post test level of with knowledge and practice regarding the post stroke rehabilitation module in experimental and control group.
4. Chi-square was used to associate the post test level of knowledge and practice score with their selected demographic variables in the experimental group.

DATA ANALYSIS AND INTERPRETATION

The analysis is a process of organizing and synthesizing the data in such a way that the research question can be answered and hypotheses are tested **(Polit and Hungler, 2011)**

This chapter deals with analysis and interpretation of the data collected from 60 caregivers. The data was organized, tabulated and analyzed according to the objectives. The findings based on the descriptive and inferential statistical analysis, are presented under the following sections.

ORGANIZATION OF DATA

The findings of the study were grouped and analyzed into the following sections.

SECTION 4.1: Description of demographic variables of caregivers in experimental and Control group.

SECTION 4.2: Assessment and comparison of pre test and post test level of knowledge regarding post stroke rehabilitation module among the experimental and control group.

SECTION 4.3: Comparison of pre test and post test level of knowledge regarding post stroke rehabilitation module between the experimental and control group.

SECTION 4.4: Assessment and comparison of post test level of practice regarding post stroke rehabilitation module in the experimental and control group.

SECTION 4.5: Correlation of post test level of knowledge with practice score regarding post stroke rehabilitation module in the experimental group and control group.

SECTION 4.6: Association of selected demographic variables with the mean differed knowledge score and practice score regarding post stroke rehabilitation module in the experimental group.

SECTION 4.1: DESCRIPTION OF DEMOGRAPHIC VARIABLES OF CAREGIVERS IN EXPERIMENTAL AND CONTROL GROUP.

Table 4.1.1 : Frequency and percentage distribution of demographic variables such as age in years, gender and marital status

N=60

S.NO.	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
		No.	%	No.	%
1.	**Age (in years)**				
	21 – 30	0	0.00	0	0.00
	31 – 40	13	43.33	14	46.67
	41 – 50	14	46.67	13	43.33
	51 – 60	3	10.00	3	10.00
	>=61	0	0.00	0	0.00
2.	**Gender**				
	Male	0	0.00	0	0.00
	Female	30	100.00	30	100.00
3.	**Marital status**				
	Married	30	100.00	30	100.00
	Unmarried	0	0.00	0	0.00
	Divorced	0	0.00	0	0.00
	Widow/Widower	0	0.00	0	0.00

Table 4.1.1 shows the frequency and percentage distribution of age, gender and marital status of the caregivers in experimental and control group.

In the experimental group, 14(46.67%) were aged between 41-50yrs, 30(100%) were females, 30(100%) were married. In the control group 14(46.67%) were aged between 31-40yrs, 30(100%) were females and 30(100%) were married.

Table 4 .1.2: Frequency and percentage distribution of demographic variables such as type of family, occupation and family monthly income in the experimental and control group.

N=60

S.NO.	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
1.	**Type of family**				
	Nuclear family	14	46.67	14	46.67
	Joint family	16	53.33	16	53.33
	Extended family	0	0.00	0	0.00
2.	**Occupation**				
	Skilled	3	10.00	2	6.67
	Semi skilled	5	16.67	7	23.33
	Professional	4	13.33	5	16.67
	Others	18	60.00	16	53.33
	Others	18	60.00	16	53.33
3.	**Family monthly income**				
	Less than Rs.5000	0	0.00	0	0.00
	Rs.5000 - Rs.10,000	0	0.00	0	0.00
	>10,000	30	100.00	30	100.00

Table 4.1.2 depicts the frequency and percentage distribution of demographic variables like type of family, occupation and family monthly income in the experimental and control group.

In the experimental group, 16(53.33%) belonged to joint family, 18(60%) were doing other occupation and 30(100%) were earning >Rs10,000/monthly. In the control group, 16(53.33%) belonged to joint family, 16(53.33%) had other forms of occupation and 30(100%) were earning >Rs10,000/monthly.

Table 4 .1.3: Frequency and percentage distribution of demographic variables such as relationship with patient, duration of care giving to the patient in the experimental and control group

N=60

S.NO	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
1.	**Relationship with patient**				
	Wife/Husband	30	100.00	30	100.00
	Sister/Brother	0	0.00	0	0.00
	Daughter/Son	0	0.00	0	0.00
	Others	0	0.00	0	0.00
2.	**Duration of care giving to the patient**				
	<2 months	28	93.33	28	93.33
	2 - 6 months	2	6.67	2	6.67
	>6 months	0	0.00	0	0.00

Table 4 .1.3.depicts the frequency and percentage distribution of demographic variables such as relationship with patient and duration of care giving to the patient in the experimental and control group.

In the experimental group, 30(100%) were either wife/husband of the patient, 28(93.3%) had less than 2 months duration of care giving to the patient. In the control group, 30(100%) were either wife / husband of the patient, 28(93.3%) had <2 months duration of care giving to the patient.

Table 4.1.1- 4.1.3 illustrates the frequency and percentage distribution of demographic variables of experimental and control group.

SECTION 4.2: ASSESSMENT AND COMPARISION OF PRETEST AND POST TEST LEVEL OF KNOWLEDGE REGARDING THE POST STROKE REHABILITATION MODULE AMONG CAREGIVERS IN EXPERIMENTAL AND CONTROL GROUP.

Table 4.2.1 : Frequency and percentage distribution of pretest and post test level of knowledge regarding post stroke rehabilitation module in the experimental group.

n=30

S. No.	EXPERIMENTAL GROUP	INADEQUATE (≤50%)				MODERATELY ADEQUATE (51-75%)				ADEQUATE (>75%)			
		Pretest		Post Test		Pretest		Post Test		Pretest		Post Test	
	Level of knowledge	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
1.	General Information on stroke	16	53.33	0	0	14	46.67	15	50.0	0	0	15	50.0
2.	Diet	28	93.33	10	33.33	2	6.67	15	50.0	0	0	5	16.67
3.	Range of Motion Exercises	30	100.0	15	50.0	0	0	11	36.67	0	0	4	13.33
4.	Communication	28	93.34	7	23.33	1	3.33	13	43.33	1	3.33	10	33.33
5.	Lifting & Transferring	24	80.0	11	36.67	3	10.0	16	53.33	3	10.0	3	10.0
6.	Hygiene & Positioning	26	86.67	5	16.67	3	10.0	13	43.33	1	3.33	12	40.0
7.	Naso gastric tube Feeding technique	29	96.67	2	6.67	1	3.33	19	63.33	0	0	9	30.0
	Overall	**29**	**96.67**	**0**	**0**	**1**	**3.33**	**18**	**60.0**	**0**	**0**	**12**	**40.0**

Table 4.2.1.represents the frequency and percentage distribution of pre test and post test level of knowledge regarding post stroke rehabilitation module in the experimental group.

In the experimental group, pre test level of knowledge with regard to 16(53.33%) had inadequate knowledge on general information of stroke, 28(93.34%) had inadequate knowledge on diet, 30(100%) had inadequate knowledge on range of motion exercises, 28(93.34%) had inadequate level of knowledge on communication, 24(80%) had inadequate knowledge on lifting and transferring, 26(86.67%) had inadequate knowledge on hygiene and positioning, 29(96.67%) had inadequate knowledge on naso gastric tube feeding technique.

The post test level of knowledge with regard to 15(50%) caregivers had moderately adequate and adequate knowledge on general information of stroke, 15(50%) moderately adequate knowledge on diet, 15 (50%) had inadequate knowledge on range of motion exercises, 13(43.33%) had moderately adequate knowledge on communication, 16(53.33%) had moderately adequate knowledge on lifting and transferring, 13(43.33%) had moderately adequate knowledge on hygiene and positioning, 19(63.33%) had moderately adequate knowledge on naso gastric tube feeding technique.

The overall level of knowledge in the pre test was inadequate 29(96.67%) which showed a improvement to 18(60.0%) moderate and 12(40.0%) adequate in the post test.

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n=30

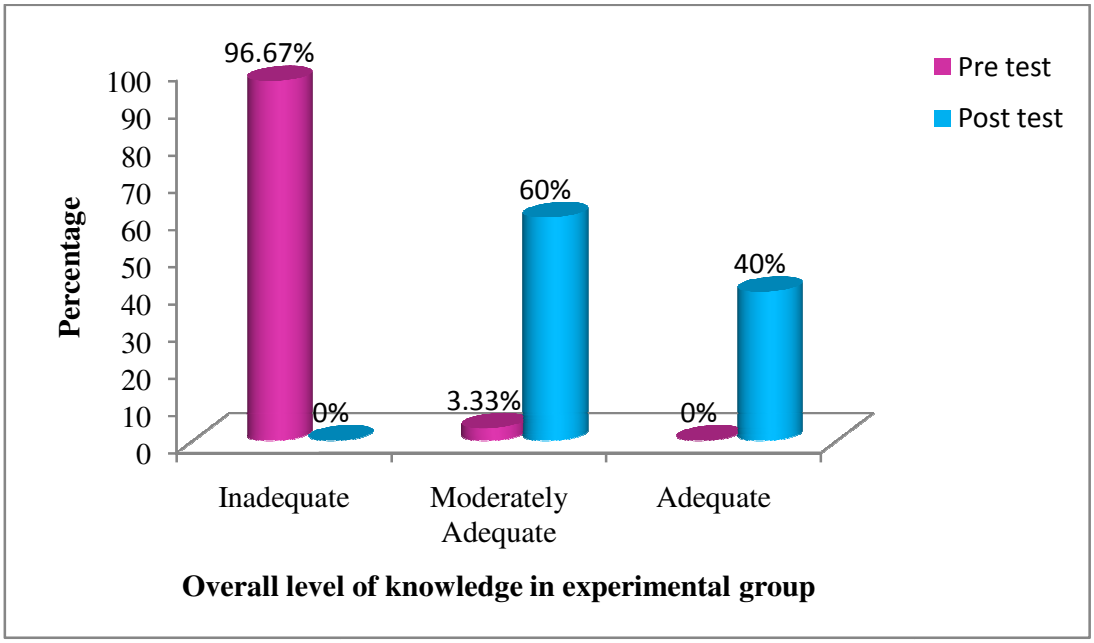

Fig 4 .2 .1: Frequency and percentage distribution of overall pre test and post test level of knowledge regarding post stroke rehabilitation module in the experimental group.

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In the experimental group, with regard to overall pretest level of knowledge, 29(96.67%) of them had inadequate knowledge, one (3.33%) had moderately adequate knowledge and none had adequate knowledge. The overall post test level of knowledge showed that 18(60%) had moderately adequate knowledge, 12(40%) had adequate knowledge and none of them had inadequate knowledge.

Table 4.2.2: Frequency and percentage distribution of pretest and post test level of knowledge regarding post stroke rehabilitation module in the control group.

n=30

S.NO.	CONTROL GROUP	INADEQUATE (≤50%)				MODERATELY ADEQUATE (51-75%)				ADEQUATE (>75%)			
		Pretest		Post Test		Pretest		Post Test		Pretest		Post Test	
	Level of knowledge	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
1.	General Information on stroke	25	83.33	25	83.33	5	16.67	5	16.67	0	0	0	0
2.	Diet	30	100.0	29	96.67	0	0	1	3.33	0	0	0	0
3.	Range of Motion Exercises	30	100.0	28	93.33	0	0	2	6.67	0	0	0	0
4.	Communication	30	100.0	30	100.0	0	0	0	0	0	0	0	0
5.	Lifting & Transferring	30	100.0	28	93.33	0	0	2	6.67	0	0	0	0
6.	Hygiene & Positioning	29	96.67	29	96.67	1	3.33	1	3.33	0	0	0	0
7.	Feeding technique	28	93.33	28	93.33	2	6.67	2	6.67	0	0	0	0
	Overall	**30**	**100.0**	**30**	**100.0**	**0**	**0**	0	0	0	0	0	0

Table 4.2.2 represents the frequency and percentage distribution of pre test and post test level of knowledge regarding post stroke rehabilitation module in the control group.

In the control group, with regard to the pre test level of knowledge 25(83.33%) caregivers had inadequate knowledge on general information of stroke, 30(100%) had inadequate knowledge on diet, 30(100%) had inadequate knowledge on range of motion exercises, 30(100%) had inadequate knowledge on communication, 30(100%) had inadequate knowledge on lifting and transferring, 29(96.67%) had inadequate knowledge

on hygiene and positioning, 28(93.33%) had inadequate knowledge on naso gastric tube feeding technique

The post test revealed an inadequate level of knowledge regarding 25(83.33%) general information on stroke, 29(96.67%) diet, 28(93.33%) range of motion exercises, 30(100%) communication, 28(93.33%) lifting and transferring, 29(96.67%) hygiene and positioning, 28(93.33%) naso gastric tube feeding technique.

The overall pre test and post test level of knowledge, 30(100%) of them had inadequate knowledge and none of them had moderately adequate knowledge and adequate knowledge.

n=30

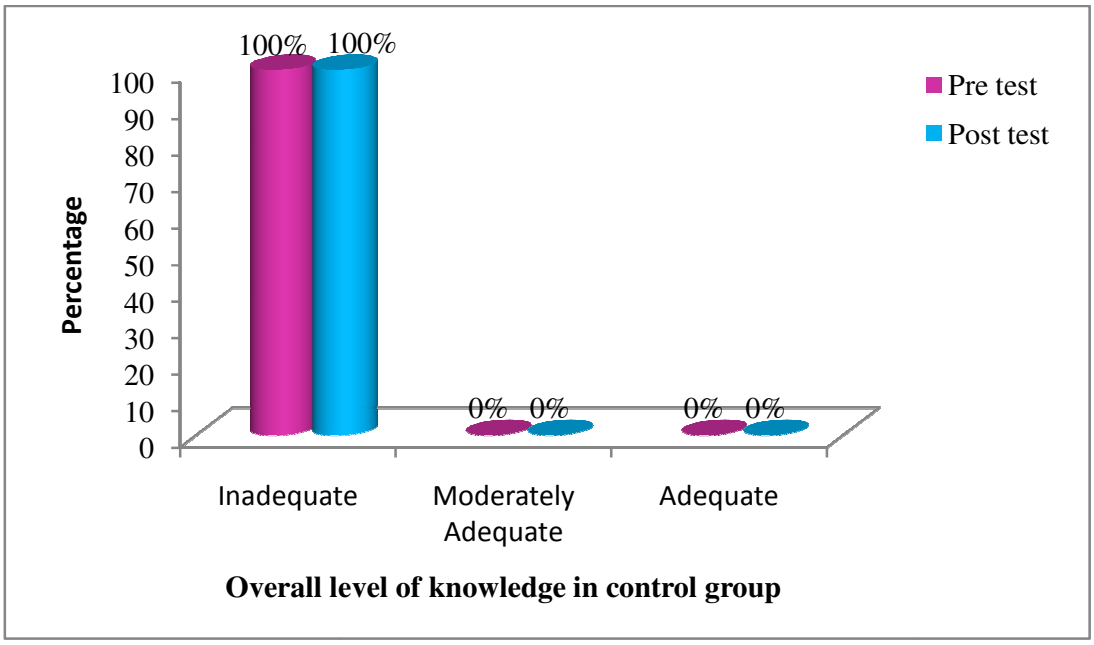

Fig.4.2.2: Frequency and percentage distribution of overall pre test and post test level of knowledge regarding post stroke rehabilitation module in the control group.

In the control group, with regard to overall pretest and post test level of knowledge, 30(100%) of them had inadequate knowledge and none of them had moderately adequate knowledge or adequate knowledge.

Table 4.2.3: Comparison of pre test and post test knowledge score regarding post stroke rehabilitation module among the experimental and control group

N=60

Level of Knowledge	Pre test		Post test		Paired 't' Value
	Mean	S.D	Mean	S.D	
Experimental group	11.4	2.17	21.93	2.75	t = 16.620*** p =0.001, S
Control group	9.97	1.19	10.37	1.73	t = 1.649 p =0.110, N.S

***p<0.001,S-Significant

Table 4.2.3. shows the comparison of pre test and post test knowledge score regarding post stroke rehabilitation module among the experimental and control group.

In the experimental group, with regard to the overall pre test level of knowledge, the mean score was 11.4 with S.D of 2.17 and in the post test, the mean score was 21.93 with S.D of 2.75. The paired 't' value was 16.620 at p <0.001 level which showed that there was a highly significant difference in pre test and post test level of knowledge. In the control group, the overall pre test mean score was 9.97 with S.D of 1.19 and in the post test mean score was 10.37 with S.D of 1.73. The paired 't' value was 1.649 at p<0.001 level, which showed that there was no significant difference in pre test and post test level of knowledge among caregivers.

Table 4.2.1-4.2.3 depicts the pre test and post test level of knowledge regarding post stroke rehabilitation module among the experimental and control group

SECTION 4.3: COMPARISON OF PRE TEST AND POST TEST LEVEL OF KNOWLEDGE REGARDING POST STROKE REHABILITATION MODULE BETWEEN THE EXPERIMENTAL AND CONTROL GROUP.

Table 4.3.1 : Comparison of pre test and post test level of knowledge regarding post stroke rehabilitation module between the experimental and control group.

N=60

Level of Knowledge	Experimental group		Control group		Unpaired 't' Value
	Mean	S.D	Mean	S.D	
Pre test	11.4	2.17	9.97	1.19	t = 3.167** p= 0.001,NS
Post test	21.93	2.75	10.37	1.73	t = 19.477*** p =0.001, S

***p<0.001, S-Significant, NS-Not Significant

Table 4.3.1.shows the comparison of pre test and post test knowledge score regarding post stroke rehabilitation module between the experimental and control group.

In the experimental group with regard to the overall pre test level of knowledge mean score was 11.4 with S.D of 2.17. In the control group mean score was 9.97 with S.D of 1.19 and unpaired 't' test value 3.167 which was statistically not significant at p<0.001 level.

In the experimental group, with regard to the overall post test level of knowledge, mean score was 21.93 with S.D of 2.75.In the control group mean score was 10.37 with S.D of 1.73 and un paired 't' value was 19.477 at p <0.001 level which showed that there was a highly significant difference in pre test and post test level of knowledge.

The post stroke rehabilitation module education by the investigator had an increased effect in improving the level of knowledge among the caregivers in experimental group . This is a well proven fact that any education program will enhance the knowledge among the caregivers.

SECTION 4.4: ASSESSMENT AND COMPARISON OF POST TEST LEVEL OF PRACTICE REGARDING POST STROKE REHABILITATION MODULE BETWEEN THE EXPERIMENTAL AND CONTROL GROUP.

Table 4.4.1 : Frequency and percentage distribution of post test level of practice on various aspects on post stroke rehabilitation among caregivers of stroke patients in the experimental group

n=30

Post Test Practice Aspects	Needs Improvement (≤50%)		Fair practice (51 – 75%)		Good practice (>75%)	
	No.	%	No.	%	No.	%
Promptly observing	13	43.33	0	0	17	56.67
Lifting & Transferring	4	13.33	21	70.0	5	16.67
Positioning	11	36.67	15	50.0	4	13.33
Back Care	14	46.67	12	40.0	4	13.33
Naso gastric tube feeding Technique	12	40.0	12	40.0	6	20.0
Overall	**4**	**13.33**	**21**	**70.0**	**5**	**16.67**

Table 4.4.1 shows the frequency and percentage distribution of post test level of practice on various aspects on post stroke rehabilitation among caregivers of stroke patients in the experimental group.

In the post test, 17(56.67%) of caregivers had good practice on promptly observing technique, 21(70%) had fair practice in the lifting and transferring, 15(50%) in positioning. 14(46.67%) had inadequate improvement for practice of back care, 12(40%) had fair practice in naso gastric tube feeding technique.

Table 4.4.2: Frequency and percentage distribution of post test level of practice regarding post stroke rehabilitation among caregivers of stroke patients in the control group

n=30

Practice Aspects	Needs Improvement (≤50%)		Fair practice (51 – 75%)		Good practice (>75%)	
	No.	%	No.	%	No.	%
Promptly observing	28	93.33	0	0	2	6.67
Lifting & Transferring	29	96.67	1	3.33	0	0
Positioning	30	100.0	0	0	0	0
Back Care	30	100.0	0	0	0	0
Naso gastric tube feeding Technique	28	93.33	2	6.67	0	0
Overall	**30**	**100.0**	**0**	**0**	**0**	**0**

Table 4.4.2 shows the frequency and percentage distribution of post test level of practice on various aspects on post stroke rehabilitation among caregivers of stroke patients in the control group.

In the post test, revealed that, 28(93.33%) needs improvement in practice on promptly observing technique, 29(96.67%) lifting and transferring, 30(100%) positioning, 30(100%) back care and 28(93.33%) naso gastric tube feeding technique.

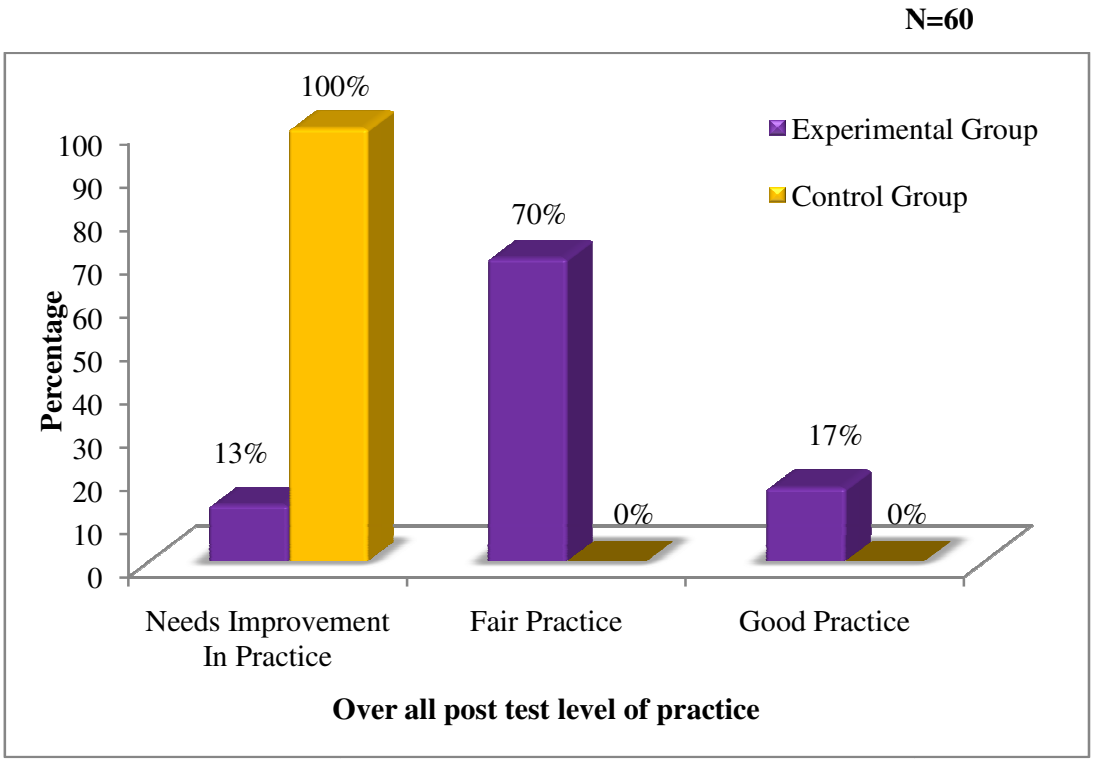

Fig.4.4.1: Percentage distribution of overall post test level of practice regarding post stroke rehabilitation module between the experimental and control group.

In the experimental group with regard to post test level of practice, 4(13.33%) needs improvement in practice, 21(70%) had fair practice and 5(16.67%) had good practice. In the control group 30(100%) needs improvement in practice, none had fair practice or good practice.

Table 4.4.3: Comparison of post test level of practice scores regarding post stroke rehabilitation among the care givers of stroke patients between the experimental and control group

N=60

Group	Mean	S.D	Unpaired 't' test value
Experimental group	42.70	7.53	t = 13.210***
Control group	22.20	3.94	p =0.001, S

***p<0.001, S – Significant

Table 4.4.3 shows that the comparison of post test practice score regarding post stroke rehabilitation module between the experimental and control group.

In the experimental group, with regard to the overall post test level of practice the mean score was 42.70 with S.D. of 7.53. In the control group, the mean score was 22.20 with S.D of 3.94 and unpaired 't' value was 13.210 at p<0.001 which showed statistically high significant difference in the level of practice between the experimental and control group.

The post stroke rehabilitation module aided in improving the level of knowledge and the on practice among the caregivers in experimental group.

SECTION 4.5: CORRELATION OF POST TEST LEVEL OF KNOWLEDGE SCORE WITH PRACTICE REGARDING POST STROKE REHABILITATION MODULE IN THE EXPERIMENTAL AND CONTROL GROUP.

Table 4.5.1 : Correlation of post test level of knowledge score with practice regarding post stroke rehabilitation module in the experimental and control group.

N=60

Group	Knowledge		Practice		'r' Value
	Mean	S.D	Mean	S.D	
Experimental group	21.93	2.75	42.70	7.53	r = 0.511** p =0.004, S
Control group	10.37	1.73	22.20	3.94	r = -0.21 p =0.001, N.S

**p<0.001, S – Significant ; N.S – Not Significant

Table 4.5.1 shows the correlation of post test level of knowledge score with practice regarding post stroke rehabilitation module in the experimental group and control group.

In the experimental group, the post test level of knowledge mean score was 21.93 with S.D of 2.75 and the post test level of practice mean score was 42.70 with S.D of 7.53. The calculated Karl Pearson "r" value was 0.511 which showed the positive correlation between the knowledge and practice which was moderately statistically significant at p<0.001 level. In the control group, the post test level of knowledge, mean score was 10.37 with the S.D of 1.73 and post test level of practice, the mean score was 22.20 with S.D of 3.94. The calculated Karl Pearson 'r'value was -0.21 which showed the negative correlation between the knowledge and practice which was statistically not significant at p<0.001.

It is a well defined fact that good practice is the outcome of sound knowledge. So, it clearly showed that when the knowledge on post stroke rehabilitation module increases their level of practice among the caregivers was also increased.

SECTION 4.6: ASSOCIATION OF SELECTED DEMOGRAPHIC VARIABLES WITH POST TEST LEVEL OF KNOWLEDGE AND PRACTICE SCORES REGARDING POST STROKE REHABILITATION MODULE IN THE EXPERIMENTAL GROUP

Table 4.6.1 : Association of selected demographic variables such as age and type of family with post test level of knowledge scores regarding post stroke rehabilitation in the experimental group.

n=30

Demographic Variables	Moderately Adequate (51 – 75%)		Adequate knowledge (>75%)		Chi-Square Value
	No.	%	No.	%	
Age (in years)					$\chi^2 = 1.856$ d.f = 2 p = 0.626 N.S
21 – 30	-	-	-	-	
31 – 40	7	23.3	6	20.0	
41 – 50	10	33.3	4	13.3	
51 – 60	1	3.3	2	6.7	
>=61	-	-	-	-	
Type of family					$\chi^2 = 6.451$ d.f = 1 p = 0.041 S*
Nuclear family	5	16.7	9	30.0	
Joint family	13	43.3	3	10.0	
Extended family	-	-	-	-	

*p<0.05, S – Significant, N.S – Not Significant

Table 4.6.1.shows association of selected demographic variables such as age and type of family with post test level of knowledge scores regarding post stroke rehabilitation in the experimental group.

In the experimental group the demographic variable, type of family (joint family), showed statistically significant association at p<0.05 level while the other demographic variables did not reveal any statistically significant association with the post knowledge score

More number of family members will facilitate the opportunity to share the information about the care needed for stroke patient.

Table 4.6.2: Association of selected demographic variables such as age and type of family with post test level of practice scores regarding post stroke rehabilitation in the experimental group.

N=30

Demographic Variables	Needs Improvement (≤50%)		Fair Practice (51 – 75%)		Good Practice (>75%)		Chi-Square Value
	No.	%	No.	%	No.	%	
Age (in years)							
21 – 30	-	-	-	-	-	-	$\chi^2 = 1.841$
31 – 40	2	6.7	8	26.7	3	10.0	d.f = 4
41 – 50	2	6.7	10	33.3	2	6.67	p = 0.765
51 – 60	0	0	3	10.0	0	0	N.S
>=61	-	-	-	-	-	-	
Type of family							$\chi^2 = 3.109$
Nuclear family	1	3.3	9	30.0	4	13.3	d.f = 2
Joint family	3	10.0	12	40.0	1	3.3	p = 0.211
Extended family	-	-	-	-	-	-	N.S

*p<0.05, N.S – Not Significant

Table 4.6.2.shows association of selected demographic variables such as age and type of family with post test level of practice scores regarding post stroke rehabilitation in the experimental group.

None of the demographic variables showed statistically significant association with practice score of caregivers.

Table 4.6.1-4.6.2 depicts the association of selected demographic variables with post test level of knowledge and practice scores regarding post stroke rehabilitation module in the experimental group.

DISCUSSION

This chapter discusses the findings of the study derived from the statistical analysis and its pertinence to the objectives set for the study and related literature of the study. The aim of the study was "to assess the effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients at Vijaya Health Center, Chennai."

The discussion is based on the objectives, the review of literature and null hypotheses specified in this study.

5.1 Description of demographic variables of caregivers

Table 4.1.1 showed the frequency and percentage distribution of age, gender and marital status of the caregivers. In the experimental group, with regard to 14(46.67%) were aged between 41-50yrs, 30(100%) were females, 30(100%) were married. In the control group 14 (46.67%) were aged between 31-40yrs, 30(100%) were females and 30(100%) were married.

Table 4.1.2 depicts the frequency and percentage distribution of demographic variables like type of family, occupation, family income. In the experimental group, 16(53.33%) belonged to joint family, 18(60%) were doing other occupation and 30(100%) were earning >Rs10,000/monthly. In the control group, 16(53.33%) were from joint family and 16(53.33%) had other forms of occupation and 30(100%) were earning >Rs10,000/monthly.

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Table 4 .1.3: depicts the frequency and percentage distribution of demographic variables such as relationship with patient and duration of care giving to the patient. In the experimental group, 30(100%) were either wife/husband of the patient, 28(93.3%) had <2months duration of care giving to the patient. In the control group, 30(100%) were either wife/husband of the patient, 28(93.3%) had <2 months duration of care giving to the patient

5.2 The first objective was to assess and compare the pre & post test level of knowledge regarding post stroke rehabilitation among the experimental and control group

The fig.4.2.1 inferred the overall pre test and post test level of knowledge regarding post stroke rehabilitation module in the experimental group. In the experimental group, with regard to overall pretest level of knowledge, 29(96.67%) of them had inadequate knowledge, one (3.33%) had moderately adequate knowledge and none had adequate knowledge. The overall post test level of knowledge showed that 18(60%) had moderately adequate knowledge, 12(40%) had adequate knowledge and none of them inadequate knowledge.

The fig.4.2.2 depicts the frequ*e*ncy and percentage distribution of overall pre test and post test level of knowledge regarding post stroke rehabilitation module in the control group. In the control group, with regard to overall pretest and post test level of knowledge, 30(100%) of them had inadequate knowledge and none of them had moderately adequate knowledge or adequate knowledge.

Table 4.2.3: shows the comparison of pre test and post test knowledge score regarding post stroke rehabilitation module among the experimental and control group.

In the experimental group, with regard to the overall pre test level of knowledge, the mean score was 11.4 with S.D of 2.17 and in the post test, the mean score was 21.93 with S.D of 2.75. The paired 't' value was 16.620 at $p < 0.001$ level which showed that there was a highly significant difference in pre test and post test level of knowledge. In the control group, the overall pre test mean score was 9.97 with S.D of 1.19 and in the post test mean score was 10.37 with S.D of 1.73.The paired 't' value was 1.649 at $p<0.001$ level, which showed that there was no significant difference in pre test and post test level of knowledge among caregivers.

The above data are consistent with the findings of meta analysis study conducted by **Sujata Das et al., (2013)** to determine the causes of deficiencies in knowledge, attitude and practice (KAP) of stroke among Indians versus other developed and developing countries. The findings revealed that mass awareness, early diagnosis and institution of appropriate management causes for deficiencies in KAP of stroke in India.

The study suggested the need to adopt in India to improve awareness and standard guidelines for the general mass.

The above data are consistent with the findings of cross sectional survey conducted by **Weltermann B. M.et al., (2008)** to improve early stroke recognition and reduce delays in the referrals. Study conducted among 133 stroke patients. They categorized under (good knowledge) if a participant knew at least 2 stroke risk factors and symptoms as well as knowing that immediate hospital admission or an emergency call is necessary in case of stroke (good action knowledge).The study results was 80.3% had good symptom knowledge, 64.7% had good risk factor knowledge, and 79.7% had good action knowledge. Stroke knowledge was excellent in 44.0% of subjects. The study concluded that patient knowledge and personal experience helps in reducing delays in identification of stroke.

5.3 The second objective was to compare the pre & post test level of knowledge regarding post stroke rehabilitation between the experimental and control group.

Table 4.3.1portrayed that the comparison of pre test and post test knowledge score regarding post stroke rehabilitation module between the experimental and control group.

In the experimental group, with regard to the overall pre test level of knowledge mean score was 11.4 with S.D of 2.17. In the control group, mean score was 9.97 with S.D of 1.19 and un paired 't' test value 3.167 which was not significant at $p<0.001$ level

In the experimental group, with regard to the overall post test level of knowledge, mean score was 21.93 with S.D of 2.75. In the control group mean score was 10.37 with S.D of 1.73 and unpaired 't' value was 19.477 at $p <0.001$ level which showed that there was a highly significant difference in pre test and post test level of knowledge.

The post stroke rehabilitation module education by the investigator had an increased effect in improving the level of knowledge among the caregivers in experimental group .This is a well proven fact that an education programs can enhances the knowledge among the caregivers.

The above data is also consistent with the findings of an Multisite, randomised trial conducted by **Sally Eames et al., (2013)** to evaluate the effects of an education package which utilised both strategies on the knowledge, health and psychosocial outcomes among 138 (control n=67, intervention n=71) stroke patients and carers. The intervention package consisted of a computer-generated, tailored written information booklet and verbal reinforcement provided. The results revealed that self-efficacy for accessing stroke information (adjusted mean difference (MD) of 1.0, p=0.004), feeling informed (MD 0.9, p=0.008), satisfaction with medical (MD 2.0, p<0.001), practical (MD 1.1, p=0.008), services and benefits (MD 0.9, p=0.036) and secondary prevention information (MD 1.7, p<0.001). The study concluded that intervention group participants had improved self-efficacy for accessing stroke information and satisfaction with information, but other outcomes were not significantly affected.

Hence the null hypothesis (NH_1) stated earlier that **"There is no significant difference in the pre and post test level of knowledge between the experimental and control group at p<0.05 level " was rejected in experimental group and accepted in control group**"

5.4 The third objective was to assess and compare the post test level of practice regarding post stroke rehabilitation between the experimental and control group

Fig.4.4.1 illustrated the percentage distribution of overall post test level of practice regarding post stroke rehabilitation module among experimental and control group. In the experimental group with regard post test level of practice, 4(13.33%) needs improvement in practice, 21(70%) had fair practice and 5(16.67%) had good practice. In the control group, 30(100%) needs improvement in practice, none had fair practice or good practice.

Table 4.4.3.shows the comparison of post test level of practice score regarding post stroke rehabilitation module between the experimental and control group. In the experimental group, with regard to the overall post test practice the mean score was 42.70 with S.D. of 7.53. In the control group, the mean score was 22.20 with S.D of 3.94 and unpaired 't' value was 13.210 at p<0.001 which showed highly significant differences in the level of practice between the experimental and control group.

The above data is also consistent with the findings of an randomized control trail conducted by **Sripthun, et al., (2010)** at North America on effectiveness of knowledge and practice on care of the stroke after discharge of patient among 73 spouses. Teaching programme administered to the spouses. The results revealed that spouses in the experimental group showed effectiveness in providing care than control group. The study concluded that educated spouses of stroke patient is effective and also recommended the stroke units for conducting discharge education programmes.

Hence the null hypothesis (NH_2) stated earlier that **"There is no significant difference in the post test level of practice between the experimental and control group at p<0.05 level" was rejected in experimental group and accepted in control group**"

The core concepts of J.W.Kennys Open System Model was the basis for the conceptual framework for this study. The investigator perceived the need for imparting the education of post stroke rehabilitation module among caregivers which may increase their knowledge and practice. The pretest knowledge assessment using structured knowledge questionnaire was the input. In throughput the intervention package post stroke rehabilitation module was conducted. Post test assessment of knowledge and practice using structured knowledge questionnaire and observational checklist respectively. It proved that there was the significant improvement of knowledge and practice among caregivers regarding post stroke rehabilitation module.

5.5.The fourth objective was to correlate the post test level of knowledge with practice regarding post stroke rehabilitation in the experimental group and control group

Table 4.5.1. revealed the correlation of post test level of knowledge score with practice regarding post stroke rehabilitation module in the experimental group and control group. In the experimental group, the post test level of knowledge mean score was 21.93 with S.D of 2.75 and the post test level of practice mean score was 42.70 with S.D of 7.53. The calculated Karl Pearson "r" value was 0.511 which showed the positive correlation between the knowledge and practice which was moderately statistically significant at p<0.001 level. In the control group, the post test level of knowledge, mean score was 10.37 with the S.D of 1.73 and post test level of practice, the mean score was

22.20 with S.D of 3.94. The calculated Karl Pearson 'r' value was -0.21 which showed the negative correlation between the knowledge and practice which was statistically not significant at $p<0.001$ level.

It is a well defined fact that adequate practice is the outcome of sound knowledge. So, it clearly showed that when the knowledge on post stroke rehabilitation module increases their level of practice among the caregivers was also increased.

The above data is also consistent with the findings of an non-equivalent control group non-synchronized study conducted by **Choi JS, et al.,(2007)** to evaluate the effects of stroke patient care education on the knowledge and practice among 40 (20=experimental, 20=control group) primary caregivers of stroke patients. The experimental group participated 2 times in an education class given by the researcher. The study result revealed that **k**nowledge(t=5..87, p=0.00) and practice(t=5.53, p=0.00) had improved significantly when compared to control group. The findings concluded that the stroke patient care education developed in this study showed a significant promotion of knowledge and practice of caregivers. Thus this program can be recommended as an intervention model for stroke patients and caregivers.

Hence the null hypothesis (NH_3) stated earlier that **"There is no significant relationship between the post test level of knowledge and practice in the experimental group and control group at the level of p<0.05" was rejected in experimental group and accepted in control group.**

5.6 The fifth objective was to associate selected demographic variables with post test level of knowledge and practice score regarding post stroke rehabilitation in the experimental group .

Table 4.6.1 shows the association of selected demographic variables such as age, and type of family with post test level of knowledge scores regarding post stroke rehabilitation in the experimental group.

The demographic variable, type of family showed statistically significant association $p<0.05$ level while the other demographic variables did not reveal any statistically significant association with the post test knowledge score of caregivers.

Table 4.6.2. showed the association of selected demographic variables such as age, education and type of family with post test level of practice scores regarding post stroke rehabilitation in the experimental group.

None of the demographic variables showed statistically significant association with practice score of caregivers.

Hence the null hypothesis (NH_4) stated earlier that **"There is no significant association of selected demographic variables with the post test level of knowledge and practice in the experimental group" was accepted for type of family and rejected for all the other demographic variables at the level of $p<0.05$".**

SUMMARY, CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

This chapter presents the summary, conclusion, implications, recommendations, and limitations of the study based on objectives selected.

6.1 SUMMARY

Stroke is the sudden death of brain cells in a localized area due to inadequate blood flow and causing damage to the brain tissue. It can be triggered by some of risk factors such as blood pressure, diabetes mellitus, obesity, smoking, excessive alcohol consumption, heart diseases etc. Most of the patients tends to develop persistent cognitive (or) language disability recurrent stroke, seizures, pneumonia, deep vein thrombosis, contractures, persistent loss of mobility, decubitus ulcer, depression and it is leading cause of disability.

Stroke rehabilitation is a targeted and organized plan to re-learn functions lost in the shortest period of time possible**.** It helps in enabling a person with impairment to reach their optimal physical, cognitive, emotional and function level. Caregivers have an important role in selecting the appropriate rehabilitation techniques, based on the needs of the stroke patients. It enable the stroke patient to live safely, independently and happily, thus improving self-confidence, self-image and self-care abilities.

The present study was conducted to assess the effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients at Vijaya Health Center, Chennai. The findings evidenced that the post stroke rehabilitation module was effective in enhancing the knowledge and practice of caregivers for caring clients with stroke.

The objectives of the study were

1. To assess and compare the pre & post test level of knowledge regarding post stroke rehabilitation module among the experimental and control group
2. To compare the pre & post test level of knowledge regarding post stroke rehabilitation module between the experimental and control group

3. To assess and compare the post test level of practice regarding post stroke rehabilitation module between the experimental and control group
4. To correlate the post test level of knowledge with practice regarding post stroke rehabilitation module in the experimental group and control group
5. To associate selected demographic variables with post test level of knowledge and post test practice score regarding post stroke rehabilitation module in the experimental group.

The study was based on the assumptions that

1. The care givers of stroke clients may have some knowledge on post stroke rehabilitation module
2. Post stroke rehabilitation module may improve knowledge and practice among care givers of stroke patients

The null hypotheses formulated were

NH_1: There is no significant difference in the pre and post test level of knowledge between the experimental and control group at $p<0.05$ level.

NH_2: There is no significant difference in the post test level of practice between the experimental and control group at $p<0.05$ level.

NH_3: There is no significant relationship between the post test level of knowledge and practice in the experimental group and control group at the level of $p<0.05$.

NH_4: There is no significant association of the selected demographic variables with the post test level of knowledge and practice in the experimental group at the level of $p<0.05$.

Review of literature was done from the primary and secondary sources which provided a base for selection of problem. Professional experience and expert's guidance from the field of Medical and Surgical Nursing provided a strong foundation for the study. It also strengthened the ideas for the conceptual framework, aided to design the methodology and develop the tool for data collection.

In view of explaining and relating various aspects of the study, the investigator had adopted **J.W.Kenny's Open System Model**

The researcher adopted a quasi experimental, two group pretest post test design to assess the effectiveness of post stroke rehabilitation module on knowledge and practice among caregivers of stroke clients. 60 samples were selected using purposive sampling technique. The tool constructed for the data collection consists of two parts:

Part A: **Data Collection Tool**

Section A: Assessment of demographic variables

Section B: Knowledge questionnaire

Section C Observational checklist

The tool for data collection had 3 sections.

Section A: Personal data sheet was used to collect the demographic variables which includes age in years, gender, marital status, type of family, occupation, relationship with patient, family monthly income, duration of care giving to the patient.

Section B: The structured knowledge questionnaire consist of, 30 questions were formulated under separate sub headings to assess the level of knowledge regarding post stroke rehabilitation module among caregivers of stroke clients. Participants were asked to select the best answer from the three options given which was formulated by the investigator.

Section C: An observational checklist was used to assess the post test level of practice regarding the post stroke rehabilitation module among caregivers of stroke clients which was developed by the investigator.

Part B: Intervention Protocol

Knowledge - Education through power point teaching and the content focused on definition of stroke, risk factors, causes, clinical features, complications, treatment options and rehabilitation.

Practice -Demonstration on lifting and transferring, back care, positioning, naso gastric tube feeding, return demonstration of one procedure from one caregiver from gathered group per day.

Reinforcement - A booklet on overview of post stroke rehabilitation module.

The pilot study was conducted at Vijaya Health Center in Stroke, Neuro wards and step down ICU. The analysis of the pilot study showed that the effectiveness of post stroke rehabilitation module on level of knowledge was 11.05 and on level of practice was 6.92, which showed high statistical significance at $p<0.01$ level. The reliability score was $r=0.86$ for structured knowledge and also for observational checklist r value was 0.86. It is feasible and practicable to conduct the main study.

The ethical aspect of research was maintained throughout the study by obtaining ethical committee clearance from the ICCR, formal permission from the authorities and written consent from the caregivers of stroke clients who participated in the study.

The study was conducted for 4 weeks. A brief introduction of self and explanation on the purpose of the study was given. In the control group, the investigator selected 30 samples who fulfilled inclusive criteria using purposive sampling technique. The pre test level of knowledge was assessed using self administered structured questionnaire. It took around 15 minutes to answer question. The hospital routine was carried out, from the same day, the practice of control group was observed for seven days. After seven days, the post test level knowledge and practice was assessed using structured questionnaire and observational check list. At the time of discharge of the patient, the intervention package and reinforcement booklet was given to the control group. With that the study was concluded in the control group.

The research had selected 4 to 5 samples per day totally 30 samples were collected in the experimental group were gathered in a well ventilated room. A structured knowledge questionnaire was administered to the caregivers. Following this, a power point teaching through lecture cum discussion was done and the booklet regarding post stroke rehabilitation module was given to the care givers. Demonstration of procedures such as lifting and transferring, back care, naso gastric tube feeding and 4 types of positions were demonstrated simultaneously after completion of each procedure. The intervention session took about 1 hour 30 minutes to complete. The Return demonstration was taken on the same day from 4-5 caregivers, one procedure by one caregiver. Then the practice of the experimental group was also assessed for 7 days. At the end of one week, post test was conducted to assess the level of knowledge and practice on post stroke rehabilitation module in the experimental group.

Major findings of the study

The data was analyzed by using descriptive and inferential statistics. In the experimental group, the overall posttest knowledge mean score was 21.93 with the S.D of 2.75 and in the control group the posttest knowledge mean score was 10.37 with the S.D of 1.73 and calculated the unpaired 't' value was 19.477 at $p<0.001$ level which showed that highly significant improvement in the level of knowledge regarding post stroke rehabilitation module between the experimental and control group. Hence the null hypotheses **NH_1** stated earlier that **"There is no significant difference in the pre test and posttest level of knowledge between the experimental and control group at $p<0.05$" was rejected in experimental group and accepted in control group.**

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In the experimental group, the overall post test practice mean score was 42.70 with S.D of 7.53 and in the control group, the mean score was 22.20 with S.D of 3.94. The calculated unpaired 't' value was 13.210 at $p<0.001$ level which showed high statistical difference in posttest practice score between the experimental and control group about the post stroke rehabilitation module. Hence the null hypotheses **NH_2** stated earlier that **"There is no significant difference in post test level of practice scores between the experimental and control group at $p<0.05$" was rejected in experimental group and accepted in control group.**

Post stroke rehabilitation module education had an positive impact in improving the knowledge of the caregivers and thus showed the effectiveness of intervention tool. The practice of caregivers in control group when compared to caregivers in experimental group regarding post stroke rehabilitation module showed significant difference which reflected that enhancement of knowledge, skill by the caregivers can have a positive effect on practice.

In the experimental group, the correlation of posttest level knowledge mean score was 21.93 with S.D of 2.75 and the practice mean score was 42.70 with S.D of 7.53. The calculated Karl Pearson r value was 0.511 which was significant at $p<0.001$ level. In the control group, the post test level of knowledge, mean score was 10.37 with the S.D of 1.73 and post test level of practice, the mean score was 22.20 with S.D of 3.94. The calculated Karl Pearson 'r' value was -0.21 which showed the negative correlation between the knowledge and practice which was statistically not significant at $p<0.001$.

Hence the null hypotheses **NH_3** stated earlier that "**There is no significant relationship between the post test level of knowledge and practice in the experimental group and control group at the level of p<0.05" was rejected in experimental group and accepted in control group**.

The analysis using chi square test, the demographic variable, type of family had showed statistically significant association at p<0.05 level while the other demographic variables did not reveal any statistically significant association with the post test knowledge and practice scores regarding the post stroke rehabilitation module among caregivers of stroke clients. Hence the null hypothesis **NH_4** stated earlier that **"There is no significant association of selected demographic variables with the post test level of knowledge and practice in the experimental group" was the accepted for type of family and rejected for all the other demographic variables at the level of p<0.05".**

6.2 CONCLUSION

The present study assessed the effectiveness of post stroke rehabilitation module on knowledge and practice among the caregivers. The investigator concluded that the education, demonstration and reinforcing booklet to the caregivers on post stroke rehabilitation module is the effective method to improve the knowledge and practice.

6.3 IMPLICATIONS

The investigator had drawn the following implications from this study which is of vital concern to the field of nursing education, nursing practice, nursing administration and nursing research.

Nursing Education

1. Sound knowledge creates and ensures delivery of sound practice. Hence, the nursing practice development of the post stroke rehabilitation module which helps the caregivers of stroke clients to prevent complications and reduce the caregivers burden after stroke and make the client live as an independent, as well as continuing nursing education programme which helps to update information
2. Conduct seminars, workshops and conferences for students regarding the recent advancement in stroke rehabilitation inorder to provide upto date information to enhance their knowledge.

3. Encourage the nursing students for effective utilization of evidence based practice

Nursing Practice

The nurses will have a initial role to work with caregivers of client with stroke to build their knowledge and practice in relation to stroke rehabilitation. This can be facilitated by motivating caregivers

1. Neuro nurses can play a major role in training of caregivers of clients with stroke in relation to home care management.
2. Recommend to the nurses of neuro units to encourage the caregivers to apply the knowledge and practice gained through the post stroke rehabilitation module, in caring for the client.
3. Implement educational programme on post stroke rehabilitation module
4. Utilize the findings of the study to plan regular and periodical health education sessions for caregivers of stroke clients in hospitals, community health centers, rehabilitation centers.

Nursing Administration

1. Nurse administrators can organize formal training programme for caregivers of clients with stroke for reducing the caregiver burden.
2. Nurse administrators should facilitate and encourage nurses to update their knowledge and practice strategies by organizing in-service education programme. It helps to transfer the information to caregivers.
3. Nursing administrators should remain updated about the rehabilitation measures by attending various workshops and conferences to introduce the needed changes.
4. Nurse managers can strengthen interdisciplinary and multidisciplinary collaboration with researchers in the field of stroke rehabilitation.

Nursing Research

1. Disseminate the findings of the study through conferences, seminars and by publishing in journals and websites.
2. Promote more research in the field of stroke rehabilitation
3. Expand the research to larger population

4. Nurse researcher should encourage the staff nurses to implement the research findings in their daily care and bring out more techniques to promote health of the clients.
5. The findings of the study will help the professional nurses and nursing students to gain knowledge on stroke rehabilitation.

6.4 RECOMMENDATIONS

1. The investigator will recommends the tie up hospitals of Omayal Achi College of Nursing to use the post stroke rehabilitation module to provide health education to caregivers of stroke clients.
2. A true experimental study can be conducted to assess the effectiveness of the post stroke rehabilitation module with practice assessment among the caregivers of stroke clients.
3. An exploratory study can be done at various settings to identify the care givers perception of stroke complications and rehabilitation measures.
4. A study can be conducted to evaluate the quality of life among care givers
5. A study can be conducted on selection of one complication with specific rehabilitative measures.
6. Similar study can be replicated on a larger sample to increase validity and generalizability of results.

6.5 LIMITATIONS

1. The researcher found difficulty to assess the practice of caregivers after intervention.

6.6 PLAN FOR RESEARCH DISSEMINATION

The research findings will be disseminated through scientific paper presentations at International and National level conferences and through the journals of neuroscience nursing, journal of rehabilitation research and Neuro Nurses Association.

6.7 PLAN FOR RESEARCH UTILIZATION

The research findings will be communicated to the administrators and nurses in the neuro settings for utilization by implementing post stroke rehabilitation module as a component of neuro rehabilitation at Vijaya Health Centre, Vadapalani .

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Canadian Stroke Network: www.canadianstrokenetwork.ca/

European Brain Council: www.europeanbraincouncil.org/

South Asia Network for Chronic Disease: www.sancd.org/

Indian Academy of Neurology : www.ian.net.in

American Heart Association : www.heart.org/.

APPENDIX – C

LETTER SEEKING EXPERT'S OPINION FOR CONTENT VALIDITY

From:

Ms Dulam Vimala Kumari
M.Sc(N) I year,
Omayal Achi College of Nursing,
Puzhal, Chennai – 600 066.

To:

Respected Madam / Sir,

Sub: Requisition for expert opinion on suggestion for content validity of the tool regarding "effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients"

This is to bring to your kind notice that I am a student studying M.Sc(Nursing) at Omayal Achi college of Nursing, Puzhal, Chennai -66, affiliated to Dr .M. G. R. Medical University, Tamil Nadu.

I am planning to conduct **" A study to assess the effectiveness of post stroke rehabilitation module on the level of knowledge and skill among care givers of stroke patients at Vijaya Health Center, Chennai".**

Herewith I am sending the structured questionnaire for knowledge assessment, observational checklist for skill assessment and intervention tool regarding post stroke rehabilitation module for caregivers of patient with stroke.

Kindly validate the tool and render your expert opinion in this regard. I am thankful to you for spending your valuable time for the validation of this tool. It will be very kind of you to return it to the undersigned at the earliest.

Thanking you,

Yours Sincerely,

(Dulam Vimala Kumari)

Enclosures:

1. Statement and objectives of the study.
2. Intervention tool regarding post stroke rehabilitation module .
3. Structured questionnaire and observational checklist.
4. Validity certificate.

LIST OF EXPERTS FOR CONTENT VALIDITY

MEDICAL EXPERTS

1. **Dr. Deepak Arjundhas,**
   Consultant Medical Neurologist,
   Vijaya Health Centre, Vadapalani,
   Chennai.

2. **Dr. Uma Pandian**
   Physiatrist
   Vijaya Health Centre, Vadapalani,
   Chennai.

MEDICAL SURGICAL NURSING EXPERTS

1. **Mrs. Hema Suresh, M.Sc (N),**
   Vice Principal,
   Meenakshi College of Nursing, Chikkarayapuram,
   Chennai.

2. **Mrs. Jaslina Gnanarani, M.Sc (N),**
   Reader,
   Apollo College of Nursing,
   Chennai.

3. **Mrs. D. Sasikala, M.Sc (N),**
   Reader,
   Apollo College of Nursing,
   Chennai.

4. **Mrs. Smitha Sunny, M.Sc (N),**
   Assistant Professor,
   St. Thomas College of Nursing,
   Changanacherry,
   Kerala.

APPENDIX – E

INFORMED CONSENT REQUISITION FORM

Good morning,

I am Ms.DulamVimala Kumari, studying M.Sc Nursing at Omayal Achi College of Nursing, Puzhal, Chennai. As a partial fulfilment of the programme, I am conducting **"A study to assess the effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients at Vijaya Health Center, Chennai".**

I request you to extend your cooperation and willing in the study. Your responses will be kept confidential and will be used only for the research study

Thank you,

Signature of investigator

(Dualam.Vimala Kumari)

INFORMED CONSENT

I understand that I am being asked to participate in a research study conducted by Ms. Dulam Vimala Kumari M.Sc Nursing student of Omayal Achi College of Nursing, Puzhal. This research study will evaluate **"A study to assess the effectiveness of post stroke rehabilitation module on the level of knowledge and practice among care givers of stroke patients at Vijaya Health Center, Chennai"**. If I agree to participate in the study, I will be given structured questionnaire to answer for knowledge assessment and I will be observed for practice by using observational check list .the answers will be kept confidential .No identifying information will be included during the analysis process. I understand that there is no risk associated with this study.

I realize that the knowledge gained from this study may help either me or other people in the future. I realize that my participation in this study is entirely voluntary and I may withdraw from the study at any time. I wish if I decide to discontinue my participation in this study, I will continue to be treated in the usual and customary fashion.

I understand that all study will be kept confidential. However, this information may be used in nursing publication and presentations. If I need to, I can contact Ms. Dulam.Vimala Kumari, M.Sc Nursing student, Omayal Achi College of Nursing, No.45 Ambattur Road, Puzhal, Chennai phone no: 04426501617 at any time during the study.

The study has been explained to me. I have read and understood the consent form, my entire question has been answered and I agree to participate. I understand that I will be given a copy of this signed consent form.

…….. …….
Signature of Participant Date

…… ……
Signature of Investigator Date:

అంగీకార ద్రువీకరణ పత్రం

నమస్కారం

నాపేరు డి. విమల కుమారి, నేను ఒమయల్ ఆచి నర్సింగ్ కాలేజీ చెన్నైలో యం.య.సి నర్సింగ్ చదువుతున్నాను. నా చదువులో బాగంగా నేను ఒక ప్రోజక్ట్ చేస్తున్నాను. పక్షవాత పునరావస కార్యక్రమం సహచరులకు సేవ చేయడంలో ఏ విదంగా ఉపయోగపడుతుంది.దయ ఉంచి ఇందులో ఉన్న ప్రశ్నలకు సమాదానం ఇవ్వగలరు, మీ జవాబులు రహస్యంగా ఉంచబడతాయి.మీ జవాబులు ఈ ఒక ప్రొజక్ట్ కు మాత్రమే ఉపయోగించబడతాయి.

ధన్యవాదములు.

డీ.విమల కుమారి

అంగీకార పత్రం

నేను, ఒమయల్ అచ్చి కాలేజీలో నర్సింగ్ విద్యార్థి అయిన విమల కుమారి యొక్క పరిశోధనా అధ్యాయంలో పాల్గొనడానికి అడగబడి ఉన్నాను. ఈ పరిశోధన ఏమనగా పక్షవాత పునరావస కార్యక్రమం సహచరులకు సేవచేయడంలో ఏవిదంగా ఉపయోగపడుతుంది. నేను ఈ అధ్యాయనంలో పాల్గొనేందుకు అంగీకరిస్తె నాకు ఉన్న జ్ఞనము మరియు సాధన నిర్మాణాత్మక ప్రశ్నాపత్రం ద్వారా అంచనావేయబడతాయి. నాచే గుర్తించబడిన సమాధానాలు రహస్యగా ఉంచబడతాయి అని గ్రహించాను. ఈ అధ్యాయనంలో పాల్గొనడానికి ఎలాంటి ప్రమాదంలేదని గుర్తించాను.

నేను ఈ అధ్యాయనం నుంచి పొదిన విజ్ఞనం నాకు లేదా ఇతర ప్రజలకు సహాయపదుతుందని తెలుసుకున్నాను.నేను ఈ అధ్యాయనంలో పాల్గొనడం పూర్తిగా

నా అభిప్రాయంపై ఆధారపడి ఉంది.నేను కావాలనుకుటే ఎ సమయంలొనైనా పరిషొధననుండి నిష్క్రమించవచ్చు.

ఈ పరిషొధన రహస్యంగా ఉంచబదుతుందని తెలుసు. అయితే ఈ సమాచారం నర్సింగ్ ప్రచురణ మరియు ప్రదర్శనలకు మాత్రమే ఉపయోగించబడతాయి అని తెలియజేయబడ్డాను.అధ్యాయనం సమ్యంలో పరిశోధన గురించి ఎ విధమైన సందేహాలు ఉన్న యడల నెను డి. విమల కుమారి, ఒమయల్ ఆచి నర్సింగ్ కాలేజి, **45** అంభత్తుర్ రొడ్డు,పుజ్ఞల్,చెన్నై ఫొను నంబర్ **04426501617** కు సంప్రదించవచ్చును

ఈ పరిశొదన గురించి నాకు పూర్తిగా వివరించబదినది. నేను అంగీకార పత్రమ్ను చదివి అర్థం చేసుకున్నాను. నేను అడిగిన అన్ని ప్రశ్నలకు పరిశొధకురాలు చక్కగా సమాధానమిచ్చారు. నెను మనస్ఫూర్తిగా అధ్యాయనంలో పాల్గొనడానికి అంగీకరిస్తున్నాను.

అభ్యర్థి యొక్క సంతకం: తేది:

పరొశొధకురాలు యొక్క సంతకం: తేది:

தகவலை ஏற்றுக்கொள்ள கோரிக்கை படிவம்

காலை வணக்கம்,

துலம் விமலா குமாரி ஆகிய நான் உமையாள் ஆச்சி செவிலியர் கல்லூரியில் முதலாம் ஆண்டு செவிலியர் கல்வி பயிலும் மாணவி. எனது படிப்பின் ஒரு பகுதியாக பக்கவாதம் நோயாளிகளை பராமரிப்பு அளிப்பவர்கள் மத்தியில் பக்கவாதம் பற்றிய அறிவு மற்றும் திறன் அளவில் பக்கவாத மறுவாழ்வு பற்றிய கல்விக்கு பிறகு எத்தகைய முன்னேற்றம் ஏற்பட்டுள்ளது பற்றிய ஆய்வு ஒன்றை விஜயா ஹெல்த் சென்டர், சென்னையில் மேற்கொண்டுள்ளேன். தாங்கள் தயவு கூர்ந்து வெளிப்படையான பதிலளித்து இதற்கு ஒத்துழைக்குமாறு கேட்டுக்கொள்கிறேன். உங்கள் பதில்கள் பாதுகாப்பாகவும் இரகசியமாகவும் வைக்கப்படும் என்றும் என் ஆய்விற்காக மட்டுமே பயன்படுத்துவேன் என்று உறுதி கூறுகின்றேன்.

நன்றி!

துலம் விமலா குமாரி

முன் அறிவிப்பு ஒப்பந்த படிவம்

உமையாள் ஆச்சி செவிலியர் கல்லூரியின் சார்பில் முதுநிலை பட்டப்படிப்பு பயிலும் துலம் விமலா குமாரி அவர்களால் நடத்தபெறும் இந்த ஆய்வில் என்னை பங்கேற்க கேட்டுக் கொண்டதை நான் ஏற்றுக்கொள்கிறேன். இந்த ஆராய்ச்சியானது பக்கவாதம் நோயாளிகளை பராமரிப்பு அளிப்பவர்கள் மத்தியில் பக்கவாதம் பற்றிய அறிவு மற்றும் திறன் அளவில் பக்கவாத மறுவாழ்வு பற்றிய கல்விக்கு பிறகு எத்தகைய முன்னேற்றம் ஏற்பட்டுள்ளது பற்றியது ஆகும். இந்த ஆய்வுக்கு நான் ஒப்புக் கொண்டால் அதனைத் தொடர்ந்து உள்ள பயிற்சிகளில் நான் பங்கேற்க வேண்டும் என்றும் என்னிடம் நடத்தும் இந்த ஆய்வு முடிவுகள் அனைத்தும் பதிவு செய்து பாதுகாக்கப்படும் என்பதை நான் அறிவேன். என்னைப் பற்றி சேகரித்த சுய தகவல்கள் அனைத்தும் வெளியிடப்படாமல் ஆய்வு மேற்கொள்ளப்படும். இதன் மூலமாக எனக்கு எந்த பாதிப்பும் இல்லை என்பதை அறிந்துக் கொண்டேன்.

எதிர்காலத்தில் இந்த ஆய்வின் முடிவுகள் எனக்கோ அல்லது பிற மக்களுக்கோ பயன்படும் என்பதை அறிவேன். நான் யாருடைய கட்டாயத்தின் பெயரிலோ அல்லது வற்புறுத்தலின் பெயரிலோ இந்த ஆய்வில் பங்கு கொள்ளவில்லை என்பதையும், தேவைப்பட்டால் இந்த ஆய்விலிருந்து நான் விலகிக் கொள்ளவும் எனக்கு முழு உரிமை உண்டு என்பதையும் அறிவேன். அவ்வாறு ஆய்விலிருந்து நான் விலகிக் கொள்ளும் பட்சத்தில் எப்போதும் பிறரைப் போலவே நடத்தப்படுவேன் என்பதை நான் அறிவேன்.

என்னைப் பற்றிய அனைத்து தகவல்களும் இரகசியமாக பாதுகாக்கப்படும் என்பதையும் தேவைப்படும் போது ஆய்வின் முடிவுகள் செவிலியர் சார்ந்த பத்திரிகைகைகளிலும் வெளியிட முழு சம்மதம் அளிக்கிறேன். இந்த ஆய்வில் தேவைப்படும் போது எப்போது வேண்டுமானாலும் துலம் விமலா குமாரி அவர்களை உமையாள் ஆச்சி செவிலியர் கல்லூரியில் தொடர்பு கொள்ளலாம் என்பதை நான் அறிவேன்.

இந்த ஆய்வு பற்றிய முழு விளக்கமும் எனக்கு தெரிவிக்கப்பட்டது. இந்த ஆய்விற்கு தேவையான கேள்விகளுக்கு தகுந்த பதில்களை அளித்து ஆய்வில் முழு மனதுடன் பங்குகொள்ள சம்மதம் அளிக்கின்றேன். இந்த ஒப்பந்த படிவத்தின் நகல் எனக்கு அளிக்கப்படும் என்பதையும் அறிவேன்.

பங்குகொள்பவரின் கையொப்பம் **தேதி:**

ஆராய்ச்சியாளரின் கையொப்பம் **தேதி:**

APPENDIX – F

DATA COLLECTION TOOL

SECTION-A: DEMOGRAPHIC VARIABLES

1) Age (in years)

A) 21-30

B) 31-40

C) 41-50

D) 51-60

E) >61

2) Gender

A) Male

B) Female

3) Marital status

A) Married

B)Un married

C) Divorced

D) Widow/widower

4) Type of family

A) Nuclear family

B) Joint family

C) Extended family

5) Occupation

A) Skilled

B) Semi skilled

C) Professional

D) Others

6) Family income

A) less than Rs.5000/month

B) Rs.5000-Rs.10,000/month

C) >10,000/month

8) Relationship with patient

A) Wife /husband

B) Sister/brother

C) Daughter/son

D) Others

SECTION-B STRUCTURED KNOWLEDGE QUESTIONNAIRE

GENERAL INFORMATION ON STROKE REHABILITATION

1) Stroke is ___

A) Decreased blood supply to heart

B) Decreased blood supply to brain

C) Decreased blood supply to kidney

2) The disease condition which is considered to be risk factor for stroke is

A) Peptic ulcer, jaundice

B) Hypertension, diabetes mellitus

C) Tuberculosis, liver cancer

3) If any one side of the brain is affected, the functional impairment occurs in

A) Same side of the body

B) Opposite side of body

C) Both right and left side of the body

4) Stroke not treated in early phase may lead to chances of

A) Multiple organ dysfunctions

B) Single organ dysfunction

C) No affect in body organ

5) Rehabilitation is

A) Restoration of caregivers' physical, mental and sensory capabilities

B) Restoration of patient is physical, mental and sensory capabilities

C) Restore energy, money, material of the care giver

6) Rehabilitation measures helps to

A) Regain maximal independence

B) Regain minimal independence

C) Regain maximal dependence

7) All puzzle exercises helps to improve

A) Vision power

B) Language ability

C) Brain function

DIET

8) The type of diet pattern acts as a causative factor for stroke is

A) Fiber rich diet

B) High fat diet

C) Protein rich diet

9) The recommended amount of salt intake for stroke patient

A) 2,000mg/day

B) 3,000mg/day

C) 5,000mg/day

10) The food which patient's with stroke should avoid in their diet is

A) Alcohol, yellow part of egg

B) Green leafy vegetables, soya bean products

C) Fish, milk

11) Higher intake of fruits and vegetables helps in

A) Highering the risk of stroke

B) Lowering the risk of stroke

C) Highering the risk of constipation

RANGE OF MOTION EXERCISES

12) Range of motion exercise refers to

A) Maintaining maximum movement of joint

B) Restricted movement of joint

C) Maintain the joint in the same position

13) Lack of range of motion exercises to the effected extremity leads to

A) Stiffening of joints

B) Increased blood circulation

C) Increased muscle tone

14) The benefit of daily Range of motion exercises

A) Improve the early mobilization

B) Improve the blood pressure

C) Improve the communication

15) Common assistive devices useful for stroke patient is

A) Cast

B) Walker

C) Crutch

COMMUNICATION

16) The appropriate method of communication to the stroke patient is

A) Verbal communication

B) Non verbal communication

C) Combined method

17) Among this, one of the effective communication approach to communicate the information to the patient is

A) Pictures in the form of Communication booklet

B) Touching the patient

C) Written content of speech

18) While communication, the care giver should follow

A) eye to eye contact

B) Ignoring the patient words

C) Chatting with others

19) Communicating the each aspect of care to the patient is to

A) Improve Self control

B) Fasten the care

C) Meet the goal

LIFTING & TRANSFERRING

20) Lifting and transferring is more important for patient with

A) Coma

B) Paralysis

C) Hypertension

21) Lifting and transferring helps in the

A) Early mobilization

B) Communication

C) Activity level

22) When lifting and transferring, the care giver should follow body mechanics for to

A) Improve immobilization

B) Secure the care giver

C) Reduce back strain of care giver

23) When lifting & transferring the patient, weight bearing must be in

A) Affected side

B) Unaffected side

C) Both sides coordination

HYGIENE & POSITIONING

24) Advantage of doing Back care is

A) To prevent bed sore

B) To relieve chest pain

C) To treat back injuries

25) If position changing is not done adequately it may lead to

A) Increased blood circulation

B) Bed sore

C) Discomfort

26) The patient with stroke should change their position in bed once in every

A) 2 hours

B) 3 hours

C) 4 hours

NASO GASTRIC TUBE FEEDING

27) Preferable position for naso gastric tube feeding

A) Supine position

B) Semi -Sitting position

C) Prone position

28) Height of the feeding tube from head of patient, while giving naso gastric tube feeding

A) 25cms

B) 45 cms

C) 65 cms

29) Amount of water flushing the feeding tube before & after giving feed/medication is

A) 5-10ml of water

B) 10-30 ml of water

C) 30-60 ml of water

30) Improper nasogastric tube feeding technique leads to

A) Heart attack

B) Aspiration

C) Liver failure

SECTION – C

OBSERVATIONAL CHECK LIST

S.NO.	ASSESSMENT CRITERIA	YES 1	NO 0
1	Promptly observe the patient daily		
2	**LIFTING & TRANSFERRING**		
A	Explain the procedure to the patient		
B	Ask patient to hold the weaker arm and flex the opposite knee		
C	Ask the client to use the stronger leg to bring the weaker leg over the edge of the bed		
D	Stabilize the patient's hip		
E	Ensure that the brake are applied to wheel chair		
F	Stabilize the patient knees between care givers		
G	Cue the patient's timing by saying 1,2,3 up		
H	Bring the buttocks across to the wheel chair seat		
I	Assist the patient to sit well back in to the chair		
J	Ask the comfort level of patient after sitting in a chair		
3	**POSITIONING**		
A	Change the position every 2nd hourly		
B	Use pillows to support the body		
C	Position patient on stroke side		
D	Position patient on un affected side		
E	Position patient in supine		
F	position patient in an arm chair		
G	Ask the comfort level of patient		
4	**BACK CARE**		
A	Arrange the all articles at bed side		
B	Provide privacy to the patient		
C	Place the patient in lateral position		
D	Clean the back with soap & water		
E	Dry the skin		
F	Apply skin lotion on back and begin smoothing it from buttock to shoulder		

S.NO.	ASSESSMENT CRITERIA	YES 1	NO 0
G	Provide a comfortable position		
5	**NASOGASTRIC TUBE FEEDING**		
A	Explain procedure to the patient		
B	Arrange the articles at bed side		
C	Elevate Head end of bed		
D	Check the position of the naso gastric tube (Auscultation /Aspiration methods)		
E	Check the temperature of feeding content		
F	Height of feeding tube Maintain 45cms from head of the patient		
G	Flush naso gastic tube with15-30ml of water before & after the feeding		
H	Avoid air entering in to the tube		
I	Recap tube after feed		
J	Provide comfortable position		

Scoring key:

The items are rated as 1 for "Yes", 0 for "No". The raw score was converted to percentage to interpret level of practice

Maximum score-35

Minimum Score- 0

SCORE	LEVEL OF PRACTICE
≤50	Needs improvement in practice
51-75%	Fair practice
>75%	Good practice

అప్పెండిక్స్ - ఎఫ్

వ్యక్తిగత సమాచారం

1) వయస్సు (సంవత్సరాలలో)

ఎ)21-30

బి)31-40

సి)41-50

డి)51-60

ఇ)>61

2) లింగం

ఎ)పురుషులు

బి)స్త్రీలు

3)వివాహంకి సంబదించిన సమాచరం

ఎ) వివాహితులు

బి) అవివాహితులు

సి)విడకులు తెసుకున్నవారు

డి)భర్త/భర్య చనిపొయినవారు

4) ఎ రకమైన కుటుంబం

ఎ)చిన్న కుటుంబం

బి)పెద్ద కుటుంబం

సి)ఉమ్మడి కుటుంబం

5) వృత్తి

ఎ)నైపుణ్యం

బి)అర్ధ నైపుణ్యం గలది

సి)సాంకేతికపరమైనది

డి)ఇతర వృత్తులు

6) కుటుంబ ఆదాయం

ఎ)నెలకి 5000 వేల లోపు

బి)నెలకు 5000-10,000 రూపాయలు

సి)నెలకి 10,000 పైన ఆదాయం

7) రోగితో మీకు గల సంబందం

ఎ)భార్య /భర్త

బి)అక్కాచెల్లెలు/అన్నాదమ్ములు

సి)కూతురు/కొడుకు

డీ)ఇతరులు

8) మీరు ఎంత కాలం నుండి సేవ చెస్తున్నారు

ఎ)<2 నెలలు

బి)2-6 నెలలు

సి)> 6 నెలలు

సెక్షన్-బి- నిర్మాణాత్మక విజ్ఞానం ప్రశ్న **పత్రం**

పక్షవత పునరావసం యొక్క సాధారణ సమాచారం

1) పక్షవాతం అనగా

ఎ)గుండెకు రక్త సరఫరా తగ్గడం

బి)మెదదుకు రక్త సరఫరా తగ్గడం

సి)మూత్రపిండాలకు రక్త సరఫరా తగ్గడం

2) ఈ క్రిందివానిలో ఏవ్యాధివలన పక్షవాతం వస్తుంది

ఎ) జీర్ణాశయంలొ పుండ్లు

బి)రక్తపోటు, మధుమేహం

సి) క్షయ, కాలేయ క్యాన్సరు

3) ఏదైనా ఒక పక్క మెదడు దెబ్బతిన్నచో, ఏపక్క బలహీనత యార్పడుతుంది

ఎ)అదే పక్కశరీరం

బి) వేరే వైపు ఉన్న శరీరం

సి)కుడి వైపు మరియు ఎడమ వైపు

4)పక్షవాతం మొదటి దశలోనె సరీయిన చికిచ్చ ఇవ్వకపోతే ఏమవుతుంది

ఎ)వివిధ శరీరభాగాలు డెబ్బతింటాయి

బి) ఒక శరీర భగం మాత్రమె దెబ్బతింటుంది

సి) శరీరభాగాలపై ఏ ప్రభావము చూపదు

5) పక్షవాతం పునారవాస కార్యక్రమం వలన ఉపయోగమేమి

ఎ) సహచరుల భౌతిక, మానసిక మరియు జాఞ్ నేంద్రియాలు స్థితి యదా స్థితికి చేర్చగలం

బి) రోగియొక్క భౌతిక, మానసిక మరియు జాఞ్ నేంద్రియాలు స్థితి యదా స్థితికి చేర్చగలం

సి) సహచరుల యొక్క శక్తి, డబ్బు, వస్తువులు యదాస్థితికి చేర్చడం

6) పక్షవాతం పునరావస కార్యక్రమం ఏ విధంగా ఉపయోగపడుతుంది

ఎ) స్వతంత్ర్యంగా అన్నిపనులు చేయగలగడం

బి) స్వతంత్ర్యంగా కొన్నిపనులు చేయగలగడం

సి) పనులు అన్ని చెసుకోవడానికి పక్కవారిని ఆశ్రయించడం

7)పజిల్ వ్యాయామాలు ఏ విధంగా ఉపయొగపడతాయి

ఎ)కంటిచూపు పెంపొదించడనికి

బి) భాషా సామర్థ్యం

సి)మెధడు పనిచెయ్యడానికి

ఆహారం:

8) ఈ క్రింది వానిలో ఎవిధమయిన ఆహారం తీసుకోవడం వలన పక్షవాతం వస్తుంది

ఎ)పీచు పదార్దాలు గల ఆహారం

బి) క్రొవ్వు అధికంగా ఉన్న ఆహారం

సి) మాంస కృతులు ఉన్న ఆహారం

9) పక్షవాతం రోగి రోజుకు ఎంత ఉప్ప తీసుకోవచ్చు

ఎ) 2 గ్రాములు

బి)3 గ్రాములు

సి) 5 గ్రాములు

10) పక్షవాతం రోగులు, ఈ క్రింది వానిలో ఏఆహారం తీసుకోకూడాదు

ఎ)మధ్యపానం, గ్రుడ్డుసొన

బి) ఆకూరలు, సోయాచిక్కుడు పదార్దాలు

సి) చేపలు, పాలు

11) పండ్లు, కూరగాయలు యక్కువగా తీసుకోవడం వలన

ఎ) పక్షవాత ప్రమాదశాతాన్ని పెంచవచ్చు

బి) పక్షవాత ప్రమాదశాతాన్ని తగ్గించవచ్చు

సి) మలబద్దకం ఎక్కువవుతుంది

చలన వ్యాయామాలు

12) వ్యాయామాలు చేయడం ద్వారా

ఎ) కీళ్ళు కదలికలను పొందవచ్చు

బి) కీళ్ళు కదలకుండా చేయవచ్చు

సి) కీళ్ళు ఒకే స్థితిలో పెట్టవచ్చు

13) వ్యాయామాలు చేయకపోవడం వలన పక్షవాతం వచ్చి కాళ్ళు, చేతులు

ఎ) బిగుసుగా అవుతాయి

బి) అధిక రక్తసరఫరా ఉంటుంది

సి) కండరాలు బలం పెరుగుతాయి

14) రొజూ వ్యాయామాలు చేయ్యడం ద్వారా

ఎ) త్వరితంగా శరీర కదలికలు పేంపొందుతాయి

బి) రక్త పోటు పెంచడానికి

సి) మంచిగా సంభాషించడానికి

15) పక్షవత రోగికి పనికొచ్చే సాధారణ సహాయక పరికరాలు

ఎ) సహాయక(పిండి)కట్టు

బి) వాకర్

సి) ఊతకర్ర

భావప్రసార నైపుణ్యం:

16) పక్షవాతం రోగితో సంభాషించడానికి ఉపయోగించు పద్దతి

ఎ) మాట్లాడటం

బి)సైగల ద్వారా చెప్పడం

సి) సైగలు మరియు మాటలు

17) పక్షవాతం రోగితో సంభాషించడానికి ఏ పద్దతి ఉత్తమమైనది

ఎ) బొమ్మలు కలిగిన పుస్తకం

బి) రోగిని తాకి సంభాషించడం

సి) వ్రాసి చూపించడం

18) రోగితో సంభాషించేటప్పుడు సహచరులు చేయవలసినది

ఎ) కళ్ళవైపు చూస్తూ సంభాషించడం

బి) రోగి మాతలను పట్టించుకోవడం

సి) ఇతరులతో సంభాషించడం

19) ప్రతి పనిని రోగితో సంభాషించడం ద్వరా

ఎ) వ్యక్తిగత నియంత్రనను పెంచడానికి

బి) త్వరగా సేవ చేయడానికి

సి) అవసరాన్ని మాత్రమె తీర్చడానికి

మంచం పై నుంచి చక్రాల బండిలోకి బదిలీ చేయడం:

20) ఏ రోగికి కదిలించే పద్దతి అవసరం

ఎ)స్పృహలో లేని వాళ్ళు

బి) పక్షవాతం వచిన వాళ్ళు

సి) రక్తపొటు రోగికి

21) కదిలించే పద్దతి వలన

ఎ) త్వరితంగా కదిలించడం

బి)సంభాషించడానికి

సి) పనిచేయడానికి

22) రోగిని కదిలించేటప్పుదు సహాయకుడు, సరీయిన శరీర స్థితిని పాటించడంద్వరా

ఎ) కదలకుండా చెయ్యడం

బి) సహచర్యుని సం రక్షణకై

సి) వెన్నుముకపై వత్తిడిని తగ్గిచడానికి

23) రోగిని కదిలించేటప్పడు, శరీర బరువు యటువైపుకు ఉండాలి

ఎ)పక్షవాతం ఉన్నవైపు

బి)పక్షవాతం లేని వైపు

సి)ఇరుప్రక్కల

స్థాన చలనము మరియు వ్యక్తిగత పరిశుభ్రత:

24)వీపును సం రక్షించడం ద్వారా

ఎ)వత్తిడి వలన వచ్చే పుండ్లను నివారించవచ్చు

బి)చాతి నొప్పిని తగించ వచ్చు

సి)వన్నెముక గాయాలను తగ్గించడానికి

25)పక్షవాత రోగి యొక్క శరీర స్థితిని మార్చకపోవడం ద్వారా కలిగె నష్టం

ఎ) రక్తప్రసరణ ఎక్కువ అవుతుంది

బి) ఒత్తిడి పుండ్లు

సి) అసంకూలత

26)పక్షవాత రోగికి ఎన్ని గంటలకొకసారి శరార స్థితిని మార్చాలి

ఎ) 2 గంటలు

బి) 3 గంటలు

సి) 4 గంటలు

27) పక్షవాత రోగికి ముక్కు గొట్టం ద్వారా ఆహారం అందించడానికి అనువైన శరీర స్థితి

ఎ) యెల్లకిలా పడుకోవడం

బి) ఆనుకొని కూర్చోవడం

సి) బొర్లా పడుకోవడం

ట్యూబు ద్వారా ఆహారమిచ్చు పద్ధతులు:

28) పక్షవాత రోగికి ఆహారం ఇచ్చేటప్పుడు ముక్కు గొట్టాన్ని ఎంత ఎత్తులో ఉంచాలి

ఎ) 25 సెం.మీ

బి) 45 సెం.మీ

సి) 65 సెం.మీ

29) పక్షవాత రోగికి ముక్కు గొట్టం ద్వారా ఆహారం అందించే ముందు తరువాత ఎంత నీటిని ఇవ్వాలి

ఎ) 5 - 10 మీ.లీ

బి) 10 - 30 మీ.లీ

సి) 30 - 60 మీ.లీ

30) ముక్కు గొట్టం ద్వారా ఆహారం అందించడానికి సరియగు పద్దతిని అనుకరించపోవడం ద్వారా ఏమవుతుంది

ఎ) అకస్మాత్తుగా గుండె పనిచేయక పోవడం

బి)ఆహారం ఊపిరితిత్తులకు చేరడం

సి) కాలేయం పనిచేయకపోవడం

பகுதி - அ

தனிநபர் விவரம்

1. வயது (வருடங்களில்)
   அ) 21 – 30
   ஆ) 31 – 40
   இ) 41 – 50
   ஈ) 51 – 60
   உ) >60

2. பாலினம்
   அ) ஆண்
   ஆ) பெண்

3. திருமணத்தகுதி
   அ) மணமானவர்
   ஆ) மணமாகாதவர்
   இ) விவாகரத்தானவர்
   ஈ) மனைவி/கணவை இழந்தவர்

4. குடும்ப வகை
   அ) தனிக்குடும்பம்
   ஆ) கூட்டுக்குடும்பம்
   இ) விரிந்த குடும்பம்

5. தொழில்
   அ) பயிற்சிபெற்ற வேலை
   ஆ) தொழில் நுட்ப வேலை
   இ) தொழில் சார்ந்த வேலை
   ஈ) சுய தொழில்
   உ) மற்றவை

6. குடும்ப வருமானம்
   அ) ரூ.5,000க்கு கீழ்

ஆ) ரூ.5,000 – ரூ.10,000

இ) >ரூ.10,000

7. நோயாளியுடனான உறவு

அ) மனைவி/கணவன்

ஆ) சகோதரி/சகோதரன்

இ) மகள்/மகன்

ஈ) மற்றவை

8. நோயாளியை கவனித்துக்கொள்ளும் காலம்

அ) <2 மாதங்கள்

ஆ) 2 – 6 மாதங்கள்

இ) >6 மாதங்கள்

பகுதி - ஆ

அறிவுத்திறன் பற்றிய கேள்வித்தாள்

பொதுவான விவரங்கள்:

1. பக்கவாதம் என்பது
   அ) இதயத்திற்கு செல்லும் இரத்தம் குறைவது
   ஆ) மூளைக்கு செல்லும் இரத்தம் குறைவது
   இ) சிறுநீர்கத்திற்கு செல்லும் இரத்தம் குறைவதால்

2. பக்கவாதத்திற்கான ஆபாயத்தை விளைவிக்கும் நோயின் நிலை
   அ) ஜீரண உறுப்புகளில் இரணம், மஞ்சள் காமாலை
   ஆ) இரத்தக்கொதிப்பு, நீரிழிவு நோய்
   இ) காச நோய், கல்லீரல் புற்றுநோய்

3. மூளையின் ஒரு பக்கம் பாதிப்பதால், செயல்பாட்டில் இது பாதிக்கப்படுகிறது
   அ) உடலின் அதே பக்கம்
   ஆ) உடலின் மறு பக்கம்
   இ) உடலின் இடது மட்டும் வலது பக்கம்

4. பக்க வாதத்தை ஆரம்ப காலத்தில் சிகிச்சை அளிக்காவிட்டால் அதனால் ஏற்படும் விளைவுகள்
   அ) பல உறுப்புகள் செயல் இழக்கக்கூடும்
   ஆ) ஒரு உறுப்பு செயல் இழக்கக்கூடும்
   இ) உடல் உறுப்புகளில் பாதிப்பு ஏற்படாது

புனர் நிர்மானம் செய்தல்:

5. புனர் நிர்மானம் என்றால்
   அ) பொறுப்பாளிகளின் உடல், மனம் மற்றும் உணர்ச்சிக்கான தகுதிகளை பழைய நிலைக்கு கொண்டு வருதல்
   ஆ) நோயாளிகளின் உடல் மற்றும் உணர்ச்சிக்கான தகுதிகளை பழைய நிலைக்கு கொண்டு வருதல்
   இ) பொறுப்பாளிகளின் சக்தி, பணம், பொருள்களை பழைய நிலைக்கு கொண்டு வருதல்.

6. புனர்நிர்மானத்தின் செயல்பாடு இதற்கு உதவுகிறது

அ) அதிகபட்ச சுதந்திரத்தை திரும்ப பெறுதல்

ஆ) குறைந்த பட்ச சுதந்திரத்தை திரும்ப பெறுதல்

இ) அதிகபட்ச சார்பின்மையை திரும்ப பெறுதல்

7. எல்லா புதிர் உடற்பயிற்களும் இதை மேம்படுத்த உதவுகிறது

அ) பார்வை சக்தி

ஆ) மொழித் திறன்

இ) மூளை செயல்பாடு

உணவு:

8. பக்கவாதம் வருவதற்கான காரணிகள் இந்த உணவு பழக்கத்தால் ஏற்படுகிறது

அ) நார்சத்து மிகுந்த உணவு

ஆ) அதிக கொழுப்புசத்து உணவு

இ) புரதசத்து உள்ள உணவு

9. பக்கவாத நோயாளிகள் உட்கொள்ளும் உப்பின் அளவு

அ) 2,000 மி.கி ஒரு நாளைக்கு

ஆ) 3,000 மி.கி. ஒரு நாளைக்கு

இ) 5,000 மி.கி. ஒரு நாளைக்கு

10.பக்கவாத நோயாளிகளில் உணவு முறையில் தவிர்க்க வேண்டிய உணவு

அ) மது, முட்டையில் உள்ள மஞ்சள் கரு

ஆ) பச்சை காய்கறிகள், சோயா மீன் பொருள்கள்

இ) மீன், பால்

11.அதிக அளவில் பழங்கள் மற்றும் காய்கறிகளை உட்கொள்ளுவதால் ஏற்படும் பயன்

அ) பக்கவாதம் ஏற்படுவதற்கான வாய்ப்புகளை அதிகரிக்கும்

ஆ) பக்கவாதம் ஏற்படுவதற்கான வாய்ப்புகளை குறைக்கும்

இ) மலச்சிக்கல் ஏற்படுவதற்கான வாய்ப்புகளை அதிகரிக்கும்

அசையும் தொடர் உடற்பயிற்சிகள்:

12.அசையும் தொடர் உடற்பயிற்சி என்பது

அ) அதிகபட்சமாக மூட்டு அசைவுகளை பராமரித்தல்

ஆ) மூட்டு அசைவுகளை கட்டுப்படுத்துதல்

இ) மூட்டு அசைவுகளை ஒரே நிலையில் பராமரித்தல்

13.அசைவு தொடர்பான உடற்பயிற்சிகள் குறைவதால் ஏற்படும் விளைவுகள்

அ) மூட்டு இணைப்புகள் இறுகுதல்

ஆ) இரத்த ஓட்டம் அதிகரித்தல்

இ) தசைகளின் வீரியம் அதிகரித்தல்

14.நாள்தோறும் அசைவு தொடர்பான உடற்பயிற்சிகளால் ஏற்படும் பயன்கள்

அ) துவக்கத்திலேயே உடல் அசைவுகளை மேம்படுத்த உதவுகிறது

ஆ) இரத்த அழுத்தத்தை மேம்படுத்துகிறது

இ) தொடர்புகளை மேம்படுத்துகிறது

15.பொதுவான பக்கவாத நோயாளிக்கு உதவும் துணை உபகரணங்கள்

அ) காஸ்ட்

ஆ) நடக்க உதவும் பிடிமான கருவி

இ) உதைகால்

தொடர்பாற்றல்:

16.பக்கவாத நோயாளிகள் மற்றவர்களிடம் தொடர்புகொள்ள சரியான முறை

அ) சொற்கள் சார்ந்த தொடர்பு

ஆ) சொற்கள் சாராத தொடர்பு

இ) இரண்டு கலந்த

17.பின்வருவனற்றுள் பக்கவாத நோயாளிகளுடன் தொடர்பு கொள்ளும் பயனுள்ள அணுகு முறை

அ) படங்கள் கொண்ட தொடர்பு கையேடு

ஆ) நோயாளிகளை தொடுவது

இ) பேசுவதை எழுத்து முறையில் காட்டுவது

18.பராமரிக்கும் போது பராமரிப்பாளர் பின்பற்ற வேண்டியது

அ) கண்ணோடு கண் தொடர்பு

ஆ) நோயாளிகளின் தேவைகளை புரக்கணித்தல்

இ) பராமரிப்பதில் மட்டுமே கவனம்

19.ஒவ்வொரு அம்சமும் நோயாளிகளுடன் தொடர்பு கொண்டு தெரிவிப்பது இதை மேம்படுத்துகிறது

அ) சுய கட்டுப்பாடு

ஆ) பாதுகாப்பை கட்டுச்செய்ய

இ) குறிக்கோளை எட்டுவது

தூக்குதல் மற்றும் இடமாற்றுதல்:

20.தூக்குதல் மற்றும் இடமாற்றுதல் இந்நோயாளிகளுக்கு முக்கியமானது

அ) உணர்வு இழந்த முழு மயக்க நிலை

ஆ) முடக்கு வாதம்

இ) இரத்தக்கொதிப்பு

21.தூக்குதல் மற்றும் இடமாற்றுதல் இதை மேம்படுத்துகிறது

அ) விரைவான அசைவுகள்

ஆ) கருத்து பரிமாற்ற தொடர்பு

இ) செயல்திறனின் அளவு

22.தூக்கும் போதும் இடமாற்றும் போது பராமரிப்பாளர் இதற்காக உடல் இயக்கவியலை பின்பற்ற வேண்டும்

அ) உடல் அசைவுகளை மேம்படுத்த

ஆ) பராமரிப்பாளரை பாதுக்காக்க

இ) பராமரிப்பாளரின் பின்புற அழுத்தத்தை குறைக்க

23.தூக்கும் போதும் இடமாற்றும் போதும் நோயாளிகளின் எடை இந்த பக்க தாங்க வேண்டும்

அ) பாதிக்கப்பட்ட பக்கம்

ஆ) பாதிக்கப்படாத பக்கம்

இ) இரண்டு பக்க ஒருங்கிணைப்பு

பின்புற பராமரிப்பு மற்றும் நிலைபாடு:

24.பின்புற பராமரிப்பின் நன்மை

அ) படுக்கைப்புண் தடுக்க

ஆ) மார்பக வலியை தடுக்க

இ) பின்புற காயங்களை சிகிச்சை செய்ய

25.உடல் நிலைபாட்டை மாற்றவில்லை என்றால் அது இவற்றை உருவாக்குகிறது

அ) இரத்த ஓட்டத்தை அதிகரிக்கும்

ஆ) படுக்கைப்புண்

இ) அசௌகரியம்

26.பக்கவாத நோயாளிகள் தங்கள் நிலைப்பாட்டை மாற்ற வேண்டும்

அ) 2 மணி நேரங்களுக்கு ஒரு முறை

ஆ) 3 மணி நேரங்களுக்கு ஒரு முறை

இ) 4 மணி நேரங்களுக்கு ஒரு முறை

உணவு வழங்கும் நிலை:

உணவு முறைகள்:

27.நாசோ இரைப்பை குழாய் மூலம் உணவு வழங்குவது

அ) மல்லாந்து படுத்திருக்கும் நிலையில்

ஆ) அரை அமர்ந்த நிலையில்

இ) புரண்ட நிலையில்

28. நாசோ இரைப்பை மூலம் உணவு வழங்கும் போது உணவு குழாய் இருக்க வேண்டிய உயரம்

அ) 25 செ.மீ

ஆ) 45 செ.மீ

இ) 65 செ.மீ

29.குழாயின் மூலம் உணவு/மருந்து வழங்கிய பின் அதனை சுத்தம் செய்ய எந்த அளவு தண்ணீரை பயன்படுத்த வேண்டும்

அ) 5 – 10 மி.லி

ஆ) 10 – 30 மி.லி

இ) 30 – 60 மி.லி

30.முறையற்ற நாசோ இரைப்பை குழாய் மூலம் உணவு வழங்குவது இதனை உருவாக்குகிறது

அ) மாரடைப்பு

ஆ) மூச்சுத்திணறல்

இ) கல்லீரல் செயலிழப்பு

SCORING KEY

SECTION – B: This section consist of structured knowledge questionnaire to assess the knowledge regarding post stroke rehabilitation module among caregivers

Scoring key

The structured questionnaire consists of multiple choice questions having only one correct answer. Hence each correct answer will be given '1' mark, and wrong answer will be given '0' mark. Thus totalling maximum of 30 marks to interpret the level of knowledge. The level of knowledge was categorized as

≤50%	Inadequate level of knowledge
51-75%	Moderately adequate level of knowledge
>75%	Adequate level of knowledge

Key:

1	B	11	B	21	A
2	B	12	A	22	C
3	B	13	A	23	B
4	A	14	A	24	A
5	B	15	B	25	B
6	A	16	C	26	A
7	C	17	A	27	B
8	B	18	A	28	B
9	A	19	A	29	B
10	A	20	B	30	B

APPENDIX – G

PLAGIARISM REPORT

Plagiarism Detector - Originality Report

Plagiarism Detector Project: [http://plagiarism-detector.com]

Originality report details:

Generation Time and Date:	8/10/2014 1:24:59 PM
Document Name:	VIMMU ALL CHAPTERS.docx
Document Location:	E:\Omayal(2014)\Vimala\08.08.2014\VIMMU ALL CHAPTERS.docx
Document Words Count:	17,631

Plagiarism Detection Chart:

<>

Referenced 5% / **Linked 0%**

Original - 95% / **0% - Plagiarism**

APPENDIX – H

CODING FOR DEMOGRAPHIC VARIABLES

Demographic Variables	Code No
1) Age (in years)	
A) 21-30	1
B) 31-40	2
C) 41-50	3
D) 51-60	4
E) >61	5
2) Gender	
A) Male	1
B) Female	2
3) Marital status	
A) Married	1
B) Un married	2
C) Divorced	3
D) Widow/widower	4
4) Type of family	
A) Nuclear family	1
B) Joint family	2
C) Extended family	3
5) Occupation	
A) Skilled	1
B) Semi skilled	2
C) Professional	3
D) Others	4

6. Family income

A) less than Rs.5000/month	1
B) Rs.5000-Rs.10,000/month	2
C) >10,000/month	3

7) Relationship with patient

A) Wife /husband	1
B) Sister/brother	2
C) Daughter/son	3
D) Others	4

8) Duration of care giving to the patient

A) <2 months	1
B) 2- 6 months	2
C) >6 months	3

APPENDIX – I

BLUE PRINT OF DATA COLLECTION TOOL

S.No.	CONTENT	ITEM	TOTAL ITEM	PERCENTAGE
1.	**Demographic Variables**	1-10	10	
2.	**Structured knowledge questionnaire**			
	-General information of stroke rehabilitation	1-7	7	10.7%
	-Diet	8-11	4	6.15%
	-Range of motion exercises	12-15	4	6.15%
		16-19	4	6.15%
	-Communication	20-23	4	6.15%
	-Lifting and transferring	24-26	3	4.61%
	-Hygiene and positioning	27-30	4	6.15%
	-Naso gastric tube feeding			
3.	**Observational checklist**	1	1	1.5%
	-Daily observation	2-11	10	15.38%
	-Lifting and transferring	12-18	7	10.7%
	-Positioning	19-25	7	10.7%
	-Back care	26-35	10	15.38%
	-Naso gastric tube feeding			
	Total	**65**	**65**	**100%**

APPENDIX – K

DISSERTATION EXECUTION PLAN – GANTT CHART

S.NO	ACADEMIC CALENDER MONTHS	OCTOBER 2012 to SEPTEMBER 2013												OCTOBER 2013 to SEPTEMBER 2014											
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
A	**Conceptual phase**																								
1	Problem identification																								
2	Literature review																								
3	Clinical fieldwork																								
4	Theoretical framework																								
5	Hypothesis formulation																								
B	**Design & planning phase**																								
6	Research design																								
7	Intervention protocol																								
8	Population specification																								
9	Sampling plan																								
10	Data collection plan																								
11	Ethics procedure																								
12	Finalization of plans																								
C	**Empirical phase**																								
13	Data collection																								
14	Data preparation																								
D	**Analytical phase**																								
15	Data analysis																								
16	Interpretation of results																								
E	**Dissemination phase**																								
17	Presentation or report																								
18	Utilization of findings																								
	Calendar months	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9

LESSON PLAN

ON

POST STROKE REHABILITATION

MODULE

APPENDIX-J

LESSON PLAN ON POST STROKE REHABILITATION MODULE

Topic	:	Post stroke rehabilitation module
Group	:	Caregivers of stroke
Place	:	Stroke ,Neuro wards and step down ICU
Duration	:	1 hour 30minutes
Teaching method	:	Lecture cum discussion, power point teaching, demonstration.
Instructor	:	Investigator
Instructional Aid	:	Power point presentation ,booklet

GENERAL OBJECTIVE **:** At the end of the Post stroke rehabilitation module the caregivers will be able to gain adequate knowledge and practice regarding post stroke rehabilitation module.

SPECIFIC OBJECTIVES **:** At the end of the post stroke rehabiliation module the caregivers will be able to

- define the stroke
- list out risk factors and causes of stroke
- identify warning signs and clinical manifestations
- point out management options of stroke
- specify complications of stroke
- explain the overview of stroke rehabilitation
- demonstrate the range of motion exercises
- recognize importance of communication booklet
- mention diet therapy of stroke
- demonstrate naso gastric tube feeding
- demonstrate lifting & transferring of patient from bed to wheel chair
- know back care techniques
- demonstrate the positioning of stroke
- describe cognitive development for stroke

S.NO	CONTRIBUTORY OBJECTIVES	CONTENT	NURSE INVESTIGATOR	PARTICIPANT ACTIVITY
1.	Introduction	**Introduction:** Globally, 15 million people suffers from stroke each year. High blood pressure contributes to more than 12.7 million strokes, 5 million will die as a consequence of stroke and 10 million will survive and of these who survive, five million will be disabled by stroke. Stroke rehabilitation program helps the patient to relearn skills lost .Participating in stroke rehabilitation helps the patient to regain independence and improve their quality of life. Care givers place an important role in providing living arrangements and re train the general living skills of patient with stroke.		
1.1	Define stroke	**Meaning of stroke:** Stroke is a loss of brain function (brain attack) that occurs when there is a sudden loss of blood supply to brain	Power point teaching	Listening
1.2	List out risk factors and causes of stroke	**Risk factors:** ❖ Obesity (lack of physical activity) ❖ Smoking ❖ Excessive alcohol consumption ❖ Uncontrolled Hypertension	Lecture cum discussion	Listening

		❖ Diabetes mellitus ❖ Heart diseases like atrial fibrillation, myocardial infarction, cardiomyopathy, cardiac valve abnormality, cardiac congenital defect **1.3 Causes:** ➢ **Ischemia**- Decreased blood supply to the brain tissue due to obstruction of blood vessel by blood clot ➢ **Thrombosis-** It is narrowing of artery by fat deposition, causes a clot to form and blocks the passage of blood ➢ **Haemorrhage**- A burst in blood vessel suddenly occurs may allow the blood to seep in to and damage brain tissue		
1.3	Identify warning signs and clinical manifestations	**Warning signs of stroke:** ➢ Sudden severe headache with unknown cause ➢ Sudden weakness (or) numbness of the face, arm (or) leg on one side of body ➢ Loss of speech (or) trouble talking ➢ Sudden dimness (or) loss of vision, particularly in one eye ➢ Unexplained dizziness, unsteadiness (or) sudden fall	Power point teaching	listening

		Clinical manifestations: ➢ Right side brain damage-Patient may have weakness in left side ➢ Left side brain damage-Patient may have weakness in right side ➢ Weakness in one side of limbs/ both upper (or) lower limbs/ all four limbs ➢ Difficulty in speaking ➢ Difficulty in writing ➢ Impairment of memory and judgement ➢ Difficulty in swallowing ➢ Unilateral hearing loss ➢ Alteration in muscle tone ➢ Alteration in reflex ➢ Urinary retension (or) incontinence ➢ Impaired skin sensation		
1.4		**MANAGEMENT:** ➢ Immediate hospitalization ➢ Based on cause medical (or) surgical treatment ➢ Physiotherapy care ➢ Rehabilitation measures	Power point teaching	Listening

<table>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1.5</td><td>Specify complications of stroke</td><td>1.7 Complications of stroke:<table><tr><th>Early complications (with in 7 days)</th><th>Late complications(>7 day</th></tr><tr><td>➢ Cerebral edema (within 96 hr)
➢ Expansion of the infarct/recurrent infarction
➢ Hemorrhagic transformation of the infarcted area
➢ Seizure
➢ Aspiration pneumonitis
➢ Gastrointestinal ulcers and/or bleeding
➢ Deep vein thrombosis and pulmonary embolism
➢ Myocardial infarction</td><td>➢ Recurrent stroke
➢ Seizure
➢ Aspiration pneumonitis
➢ Deep vein thrombosi pulmonary embolism
➢ Decubitus ulcer
➢ Persistent cognitive or la dysfunction
➢ Contractures
➢ Depression
➢ Persistent loss of mobilit</td></tr></table></td><td>Power point teaching</td><td>listening</td></tr>
<tr><td>2.</td><td>Explain overview of stroke rehabilitation</td><td>Stroke Rehabilitation
Meaning-Stroke rehabilitation provides a targeted and organized plan to re-learn functions lost in the shortest period</td><td>Power point teaching</td><td>listening</td></tr>
</table>

		of time possible. **Aim**- Rehabilitation helps to restoration of patient physical, cognitive & sensory capabilities **COMPONENTS:** Post Stoke rehabilitation includes_ ➢ Range of motion exercises ➢ Communication skill ➢ Diet therapy ➢ Naso gastric tube feeding technique ➢ Lifting & transferring from bed to wheel chair ➢ Positioning ➢ Cognitive development		
2.1	Demonstrate range of motion exercises	**Range of motion exercises and ambulation with assistive devices:** **Meaning:** ROM exercises is to maintaining normal range of motion of all joints **Purposes:** ➢ To facilitate early mobilization ➢ To reduce the stiffening of joints ➢ To prevent further formation of clot in the blood vessels	Demonstration	Return demonstrations

Exercise	Description
Flexion	Bending, usually far ward but occasionally backward eg: neck, wrist joint, elbow joint, knee joint, hip joint, ankle joint
Extension	Straitening (or) bending backward eg: neck, wrist joint, elbow joint, knee joint
Abduction	Movement away from the mid line of the body eg: wrist joint, elbow joint
Adduction	Movement towards the midline of the body eg: wrist joint, elbow joint
Circumduction	Movement of a limb (or) digit so that it describes the shape of cone eg: shoulder joint
Rotation	Movement round the long axis of a bone eg: shoulder joint, neck
Pronation	Turning the palm of the hand down eg: wrist joint
Supination	Turning the palm of the hand up eg: wrist joint
Inversion	Turning the sole of the foot inwards eg: ankle joint
Eversion	Turning the sole of the foot out words eg: ankle joint

2.2	Recognise importance of communication booklet	**Communication skill:** Effective way to communicate with the stroke patient is- **Usage of communication booklet-** **Purposes:** ➢ To improve communication ➢ To identify needs of patient This is the best way to improve communication .which is approximately 6”x5.5”in size and pre made one. It contains pictures, users simply point to the picture by using a finger or stylus to indicate their choice. Topics covered are: yes/no, about me, WH questions, alphabet spelling boards, comments, basic needs, feelings, activities, personal care, hot and cold drinks, grocery shopping, fast foods, health & beauty aids, visitors, places, meal choices and more! Extra blank pages are provided to include your own vocabulary.	Power point teaching	Listening

<table>
<tr>
<td>2.3</td>
<td>Mention diet therapy</td>
<td>
Diet therapy including feeding techniques (nasogastric tube, oral, self feeding):
Healthy food habits can help you reduce three risk factors for stroke — high cholesterol levels, high blood pressure and excess weight.
<table>
<tr><th>Foods to be taken</th><th>Foods to be avoided</th></tr>
<tr>
<td>
➢ Less salt intake (Recommendation is 2g/day)
➢ Pulses
➢ unsaturated fatty oils (PUFA oils, rice brown oil)
➢ Fruits & vegetables -Choose 5 or more servings each day it reduces risk of stroke
➢ Fish-2 servings /week
➢ Milk-calcium rich diet
➢ Green and yellow vegetables –antioxidants protects from stroke
</td>
<td>
➢ Red meat (mutton and beef)
➢ Dairy products(ghee and butter)
➢ Yellow part of egg
➢ Saturated fatty oils (palm oil, vanaspathi, dalda)
➢ <u>Others:</u>
❖ Alcohol
❖ Tobacco-nicotine products (cigerrate, beedi, gutka, snuff, tobacco leaves)
</td>
</tr>
</table>
</td>
<td>Power point teaching</td>
<td>Listening</td>
</tr>
</table>

2.4	Demonstrate naso gastric tube feeding	**Naso gastric tube feeding:** ➢ Explain the procedure to the patient ➢ Arrange the articles at bed side ➢ Position the patient in semi sitting position ➢ Checking tube placement- ➢ Attach syringe to end of NG tube aspirate back on syringe gently to obtain gastric contents ➢ Keep the tip of the tube in a bowl of water & watch for any bubbles. If in lungs there will be air bubbles ➢ Check the temperature of feeding content ➢ Remove plunger from a 60ml syringe pinch the NG tube and connect syringe to feeding tube ➢ Height of feeding tube maintain 45cms from head of the patient ➢ Flush nasogastric tube with15-30ml of water before & after the feeding ➢ Avoid air entering in to the tube ➢ Various volumes of water have been suggested for drug dilution, which includes 10-30ml & up to 60-90ml ➢ Remove the syringe & recap tube after feed ➢ Provide comfortable position	demonstration	Observing steps of procedure and return demonstration

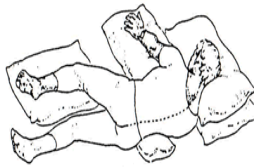
		➢ Frequent mouth wash is necessary ➢ Improper nasogastric tube feeding leads to aspiration.		
2.5	demonstrate lifting and transferring from bed to wheel chair	**Lifting and transferring from bed to wheel chair:** **Purposes:** ➢ To reduce risk of injury while lifting and transferring ➢ To initiate early mobilization **Role of care giver:** ➢ Explain procedure to the patient ➢ Position the chair (or) wheel chair in line with the bed. Place the chair parallel to bed and faces either head (or) foot of bed ➢ First ask the patient to hold on to weaker arm and next bend the opposite knee ➢ Hold the patient with one hand on the pelvis and the other hand on the patient shoulder blade ➢ Ask the patient to roll towards you, with you guiding as necessary ➢ Ask the patient to use their stronger leg, to bring the weaker leg over the edge of the bed ➢ Stabilize the patient hip and ask the patient push up to sitting ➢ If the patient is sitting too far in the bed, shuffle the	demonstration	Observing steps of procedure and return demonstration

		patient bottom forward ➢ Patient can place their strong hand on the arm rest of the wheel chair (or) chair ➢ Cue the patient timing by saying 1, 2, 3 up ➢ To transfer lean the patient forward, pivot at the patient knees, bring the buttocks over to the chair ➢ Assist the patient to sit well back in to the chair ➢ Make sure that the flat plates are secure ➢ Ask the patient whether feel comfortable or not		
2.6	Know back care techniques	**Back care:** **Meaning** Back care means cleaning and massaging the back **Benefits** ➢ To prevent bed sore ➢ Improve circulation & relieve fatigue **Steps of procedure:** ➢ Explain procedure to the patient ➢ First place patient in lateral position with the back towards the care giver ➢ Provide privacy to the patient ➢ Remove the cloths and expose the back from shoulders to buttocks	Demonstration	Observing steps of procedure and return demonstrtions

		➢ Wash back thoroughly from shoulders to buttocks with the help of clean wet cloth ➢ Apply soap in circular manner ➢ Clean the soap with water and dry thoroughly with towel ➢ Take body lotion in your hands and smooth the lotion around the entire surface of the palms ➢ Apply lotion on the back ,beginning from buttock sand smoothening in circular movement towards the shoulders ➢ Begin the massage from buttocks towards the shoulders in _ ➢ Circular movements for 3 min ➢ Kneading strokes for 3 min ➢ Tapotment for 3 min ➢ Friction for 2-3 min ➢ Assist the client in a comfortable position for a period of rest (or) sleep		
2.7	Perform positioning of stroke patient	**Positioning:** Every 2nd hourly has to change the position of the patient	demonstration	Observing steps of procedure and return demonstration

Benefits

- To provide comfort
- To prevent bed sore

Type of position	Procedure	Position
Lying on the back	➢ Lying flat on the bed ➢ Head in mid line position ➢ Use towel to position the head centrally ➢ Pillow can be place under weaker shoulder and arm ➢ Ensure that the weaker leg is placed in a neutral position and not rotated out, use pillows to hold the leg in position	
Lying on the unaffected side	➢ Ensure that the patient is well rolled over on to your side ➢ Ensure that the head is well supported & in good alignment ➢ Place a pillow under the weak arm ➢ Bend the affected knee &Place the pillow under leg	

		Lying on the weak side	➢ Ensure that the weak arm is placed away from the body before turning the patient ➢ Roll patient on weaker side allowing the body to rest back on to the pillow ➢ Slide weak shoulder forward ➢ Place a pillow between the patient's legs			
		Sitting position in a chair	➢ Ensure that the patient is not slouched ➢ They should be seated well back in to the chair ➢ Avoid leaning to one side ➢ Place a pillow under weaker arm ➢ Ensure that their foot is flat on the floor ➢ Place towel (or) cushion to the weak side			
2.8	To describe cognition development for stroke	**Cognitive development:** Brain training exercises such as word problems, memory problems, mathematics, and puzzles may exercise the brain. through regular stimulation of brain helps to improve cognitive skills of individual			Power point teaching	Listening

	Conclusion	**Conclusion:** Stroke rehabilitation is a targeted and organized plan to re-learn functions lost in the shortest period of time possible**.** Based on the needs of the stroke patients, the caregiver can select the appropriate rehabilitation techniques. It, enable the stroke patient to live safely, independently and happily, thus improving the self-confidence, self-image and self-care abilities.		

பக்கவாதத்திலிருந்து பழைய நிலைக்கு மாறுவது பற்றிய பாடத்திட்டம்

பக்கவாதத்திற்கு பின் பழைய நிலைக்கு மாறுவது பற்றிய பாடத்திட்டம்

தலைப்பு	:	பக்கவாதத்திற்கு பின் பழைய நிலைக்கு திரும்புதல்
குழுமம்	:	பக்கவாத நோயாளிகளின் காப்பாளர்கள்
இடம்	:	பக்கவாத நரம்பியல் வார்டு மற்றும் அவசர சிகிச்சை பிரிவு
கால நேரம்	:	1 மணி 30 நிமிடங்கள்
கற்பிக்கும் முறை	:	சொற்பொழிவுடனான விவாதம், பவர்பாயின்ட் மூலம் கற்பித்தல், செய்முறை விளக்கம்
கற்பிப்பவர்	:	ஆய்வாளர்
கற்பிக்க உதவும் கருவி	:	பவர்பாயின்ட் மூலம் விளக்கம், சிறு புத்தகம்

பொதுவான குறிக்கோள் : இந்த பக்கவாதத்திற்கு பின் முந்தைய நிலைக்கு திரும்புதல் பற்றிய கற்பித்தலுக்கு பிறகு பக்கவாத நோயாளிகளின் காப்பாளர்கள் பக்கவாதத்திற்கு பின் முந்தைய நல்ல நிலைக்கு திரும்புதல் பற்றிய போதுமான அறிவுத்திறனையும் பழக்கத்தையும் பெறுவார்கள்

குறிப்பான குறிக்கோள் : இந்த பக்கவாதத்திற்கு பின் முந்தைய நல்ல நிலைக்கு திரும்புதல் பற்றிய படிப்பினைக்கு பிறகு காப்பாளர்கள் கீழ்வருவம் அறிவாற்றலை பெறுவார்கள்

- பக்கவாதத்தை விவரித்தல்
- பக்கவாததிற்கான அபாய காரணிகள் மற்றும் பக்கவாத வருவதற்கான காரணம்
- பக்கவாத அபாய அறிகுறிகளை கண்டறிதல் மற்றும் மருத்துவ ரீதியான மாறுதல்கள்
- பக்கவாதத்தை சமாளிக்கும் வழிமுறைகள்
- பக்கவாதத்தினால் ஏற்படும் சிக்கல்கள்
- பக்கவாதத்திற்கு பின் முந்தைய நிலைக்கு திரும்புதல் பற்றிய ஒரு கண்ணோட்டம்
- அசைவு உடற்பயிற்சிக்கான செய்முறை
- நோயாளிகளுடம் தொடர்பு கொள்வதைப் பற்றிய சிறுபுத்தகத்தின் முக்கயத்துவம்
- பக்கவாத நோயாளிக்கு அளிக்கும் உணவு ரீதியான சிகிச்சை
- நோயாளியை படுக்கையிலிருந்து சக்கர நாற்காலிக்கு தூக்குதல் மற்றும் மாற்றுதலை செய்துகாட்டுதல்
- பின்புறத்தை பராமரிக்கும் உத்திகள் பற்றிய அறிதல்
- பக்கவாத நோயாளியை நிலைப்படுத்துலுக்கான செய்முறை
- பக்கவாத நோயாளியின் மூளை செயல்பாடுகளை விவரித்தல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
1.	முன்னுரை	**முன்னுரை:** ஒவ்வொரு வருடமும் உலகம் முழுவதும் 15 மில்லியன் நபர்கள் பக்கவாதத்தினால் பாதிக்கப்படுகிறார்கள். ஏறத்தாழ 12.7 மில்லியன் நபர்கள் அதிக இரத்த அழுத்தத்தால் பாகவாதம் ஏற்பட்டு பாதிக்கப்படுகிறார்கள். பக்கவாதத்தால் 5 மில்லியன் நபர்கள் பாதிக்கப்பட்டு இறக்கிறார்கள், 10 மில்லியன் நபர்கள் பாதிக்கப்பட்டு உயிருடன் இருப்பார்கள். அதிலும் 5 மில்லியன் பாதிக்கப்பட்டவர்கள் ஊனமுற்றவர்களாக இருப்பர். பக்கவாதத்தில் இருந்து திரும்ப பழைய நிலைக்கு வருவதற்கான திட்டமானது ரு நோயாளி தன இழந்த திறமைகளை திரும்பவும் கற்றுக்கொள்ள உதவுகிறது. மேற்கூறிய திட்டத்தில் பங்கெடுத்துக்கொள்வதால், ஒரு நோயாளிக்கு தன்னுடைய சுதந்திரம் திரும்பப் பெறவும் தன் வாழ்க்கையின் தரத்தை உயர்த்தி கொள்ளவும் உதவுகிறது. பக்கவாத நோயாளிகளை கவனித்துக்கொள்பவர்கள் நோயாளிகள் வாழ்வதற்கான ஏற்பாடுகளை செய்துத்தருவதில் முக்கிய பங்கு வகிக்கிப்பதோடு பக்கவாத நோயாளிகள் வாழும் திறமைகளில் பயிற்சி எடுக்க உதவுகிறார்கள்.		
1.1	பக்கவாதத்தை பற்றி விவரி	**பக்கவாதம்:** **பக்கவாதத்தின் பொருள்:** மூளைக்கு செல்லும் இரத்த திடீரென்று குறைவதால், மூளை தன் செயல்பாடுகளை இழப்பதே பக்கவாதம் ஆகும்.	பவர்பாயின்ட் மூலம் கற்பித்தல்	கவனித்தல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
1.2	பக்கவாதத்திற்கான காரணிகள் பட்டியலிடு	**காரணிகள்:** ❖ உடல் எடை பெறுகுதல் ❖ புகைப்பிடித்தல் ❖ அதிக அளவில் மது அருந்துதல் ❖ கட்டுக்கடங்காத இரத்த அழுத்தம் ❖ நீரிழிவு நோய் ❖ இதய நோய்கள் (ஊற்றரை பாதிப்பு, மயோகார்டியல் இன்பார்க்ஷன், கார்டியோமயோபதி, இதய வால்வு பிறழ்தல், இதயத்தில் பிறவி குறைபாடு) **இதய நோய்கள்:** ➢ **குருதி ஊட்டக்குறை-** இரத்தக் குழாய்களில் ஏற்படும் உறைப்பினால் மூளை தசைகளுக்கு இரத்தம் குறைதல். ➢ **நாளங்களில் இரத்தம் உறைதல்-** இரத்தக் குழாய்களில் கொழுப்பு அடைத்துக் கொள்வதால், இரத்த ஓட்டத்தை தடைச்செய்கிறது. ➢ **குறுதிப்போக்கு-** இரத்த குழாய்கள் வெடிப்பதால் மூளை தசைகளுக்கு பாதிப்பு ஏற்படுகிறது.	சொற்பொழிவு மற்றும் கலந்துரையாடல்	கவனித்தல்
1.3	பக்கவாதத்திற்கான அறிகுறிகள்	**பக்கவாத்தின் அறிகுறிகள்:** ➢ காரணமில்லாமல் திடீரென்று ஏற்படும் கடுமையான தலைவலி. ➢ உடலில் முகம், கை அல்லது கால் ஆகியவற்றில் ஒரு பக்கமே	பவர்பாயின்ட் மூலம் கற்பித்தல்	கவனித்தல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		ஏற்படும் பலவீனம் அல்லது மரத்துப் போகும் தன்மை. ➢ பேசும் திறனை இழத்தல் அல்லது பேசுவதில் தடை. ➢ குறிப்பாக ஒரு கண்ணில் மட்டுமே ஏற்படும் பார்வை மங்கும் தன்மை அல்லது பார்வை இழப்பு. ➢ காரணம் கூறமுடியாத தலை சுற்றல், தடுமாற்றம் அல்லது திடீரென்று விழுதல். **மருத்துவ வெளிபாடு:** ➢ வலது புற மூளையில் சேதம் ஏற்பட்டால் - நோயாளிகளுக்கு இடது பக்கம் பலவீனம் ஏற்படும். ➢ இடது புற மூளையில் சேதம் ஏற்பட்டால் - நோயாளிகளுக்கு வலது பக்கம் பலவீனம் ஏற்படும். ➢ ஒரு பக்க கைகால்/கைகள் அல்லது கால்கள் ஏற்படும் பலவீனம். ➢ பேசுவதில் தடை ➢ எழுதுவதில் தடை ➢ ஞாபகசக்தி மற்றும் முடிவெடுப்பதில் தடை ➢ முழுங்குவதில் தடை ➢ ஒரு பக்கமே ஏற்படும் காது கேளாமை ➢ தசைகளில் ஏற்படும் மாறுதல்		

<table>
<tr><th>வ.எண்.</th><th>பங்கேற்கும் குறிக்கோள்</th><th>பொருளடக்கம்</th><th>செவிலிய ஆய்வாளர்</th><th>பங்கேற்பாளரின் செயல்பாடு</th></tr>
<tr><td></td><td></td><td>➢ அணிச்சை செயல்களில் மாறுதல்
➢ கட்டுப்படாமல் சிறுநீர் கழிதல்
➢ சருமத்தில் உணர்ச்சி குறைதல்</td><td></td><td></td></tr>
<tr><td>1.4</td><td>பக்கவாதத்தை சமாளிக்கும் வழிமுறை</td><td>சமாளித்தம் வழிமுறை:
➢ உடனடியாக மருத்துவமனையில் அனுமதித்தல்
➢ மருத்துவம் மற்று அறுவை சிகிச்சை காரணங்களை அடிப்படையாக கொண்டே அமைகிறது.
➢ உடற்பயிற்சி மூலம் நோயை குணப்படுத்துதல்
➢ பக்கவாதத்திலிருந்து பழைய நிலைக்கு வருவதற்கான முறை</td><td>பவர்பாயின்ட் மூலம் கற்பித்தல்</td><td>கவனித்தல்</td></tr>
<tr><td>1.5</td><td>பக்க்வாத்த்தினால் ஏற்படும் சிக்கல்கள்</td><td>பக்கவாதத்தினால் ஏற்படும் சிக்கல்கள்:
<table>
<tr><th>ஏழு நாட்களுள் ஏற்படும் ஆரம்பகால சிக்கல்கள்</th><th>ஏழு நாட்களுக்கு பிறகு ஏற்படும் சிக்கல்கள்</th></tr>
<tr><td>➢ பெருமூளை வீக்கம் (96 மணி நேரத்திற்குள்)
➢ இறப்பை வீக்கம்/மீண்டும் மீண்டும் ஏற்படும் வீக்கம்
➢ இறப்பை வீக்கத்தால் சிதைவு ஏற்படுதல்
➢ சீசர்
➢ மூச்சு சம்பந்தமான</td><td>➢ அடிக்கடி ஏற்படும் பக்கவாதம்
➢ சீசர்
➢ சுவாசத்தீல் நிமோனைட்டிஸ்
➢ ஆழமான நரம்புகளில் இரத்த உறைவு மற்றும் நுரையீரலில் இரத்த</td></tr>
</table></td><td>பவர்பாயின்ட் மூலம் கற்பித்தல்</td><td>கவனித்தல்</td></tr>
</table>

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		நீமோனைட்டிஸ் ➢ குடலில் ஏற்படும் புண் அல்லது இரத்த போக்கு ➢ ஆழமான நரம்புகளில் இரத்த உறைவு மற்றும் நுரையிலில் இரத்த குழாய் அடைப்பு ➢ மாரடைப்பு குழாய் அடைப்பு ➢ டெகுபைடிஸ் அல்சர் ➢ நிலையான புலனுர்வு அல்லது மொழி பிறழ்ச்சி ➢ சுருக்கங்கள் ➢ மன அழுத்தம் ➢ உடல் இயக்கதை தொடர்ந்து இழத்தல்		
2.	பக்கவாதத்திலிருந்து பழைய நிலைக்கு திரும்புதல் பற்றி விவரி	**பக்க வாதத்திலிருந்து பழைய நிலைக்கு திரும்புதல் - பொருப்பாளரின் பங்கு** **பொருள்-** இயன்ற நேரத்தில் குறைந்த காலகட்டத்தில் இழந்த செயல்பாடுகளை மீண்டும் கற்றுக்கொள்ள நல்ல பாடதிட்ட முறையில் பக்கவாதத்திலிருந்து பழைய நிலைக்கு வரும் பயிற்சி உதவுகிறது. **குறிக்கோள்-**ஒரு நோயாளியின் உடல் நிலை, அறியும் திறன், உணர்ச்சி ஆகியவற்றை திரும்பவும் பெற பக்கவாததிலிருந்து பழைய நிலைக்கு வருவதற்கு உண்டான பயிற்சிகள் உதவுகின்றன. **பக்கவாததிலிருந்து பழைய நிலைக்கு வருவதற்கு உண்டான பயிற்சிகளின் கால அளவு:** பக்கவாதத்தினால் பாதிக்கப்பட்ட நோயாளி ஸ்திரமான நிலையில்	பவர்பாயின்ட் மூலம் கற்பித்தல்	கவனித்தல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		இருக்கும் பொழுதே பயிற்சி ஆரம்பித்துவிட வேண்டும். பக்கவாதம் ஏற்பட்டு 24 மணி முதல் 48 மணி நேரத்திற்குள் துவங்க வேண்டும். ஒரு நோயாளியின் தனிப்பட்ட சூழ்நிலைகளை சார்ந்தே அமைந்துள்ளது இந்த பயிற்சிகள். பயிற்சிக்கான வசதிகள் பொருந்திய மருத்துவ மனையில் பொதுவாக 2 முதல் 3 வாரங்கள் நோயாளிகள் தங்கி, சமமாக நிகழ்த்தப்படும் தீவிரமான பயிற்சிகளில் நோயாளிகள் ஈடுபடுத்தப்படுகிறார்கள். ஒரு நாளைக்கு 3 மணி நேரம், வாரத்திற்கு 5 முதல் 6 நாட்கள் இந்த பயிற்சி அளிக்கப்படுகிறது.		
		அங்கங்கள்: பக்கவாதத்திற்கான பயிற்சிகள்: 2.1 தொடர்ந்து அளிக்கப்படும் அசையும் உடற்பயிற்சிகள் மற்றும் உதவிகரமான உபகரணங்களோடு இடம் விட்டு இடம் பெயரும் பயிற்சி 2.2 தொடர்பு கொள்ளும் திறன் 2.3 உணவு முறை மற்றும் உட்கொள்ளும் முறை (மூக்கு வழியாக, வாய், மற்றும் தானே உண்ணும் முறை) 2.4 படுக்கையிலிருந்து சக்கர நாற்காலியில் தூக்கி வைப்பதும் மற்றும் மாற்றுவதும் 2.5 நிலை மற்றும் சுகாதாரம் (பின்புற பராமரிப்பு, தலை முடி பராமரிப்பு, குளித்தல் மற்றும் உடை அணிதல்).		

<table>
<tr><th>வ.எண்.</th><th>பங்கேற்கும் குறிக்கோள்</th><th>பொருளடக்கம்</th><th>செவிலிய ஆய்வாளர்</th><th>பங்கேற்பாளரின் செயல்பாடு</th></tr>
<tr><td>2.1</td><td>அசைவு
பயிற்சிகளை
செய்துகாட்டுதல்</td><td>அசைவு பயிற்சிகள் மற்றும் உபகரணங்களோடு இடம் விட்டு இடம் பெயரும் பயிற்சிகள்
பொருள்:

அனைத்து மூட்டுகளிலும் சாதாரண நிலையை பராமரிக்க அசைவு பயிற்சிகள் உதவுகின்றன.
நோக்கங்கள்:
➢ வெகு விறைவில் உடல் அசைவை ஏற்படுத்துதல்
➢ மூட்டுகளில் ஏற்பட்டிருக்கும் இறுக்கத்தை குறைப்பது
➢ இரத்த நாளங்களில் இரத்த உறைவு ஏற்படாமல் தடுக்க.

<table>
<tr><th>உடற்பயிற்சி</th><th>விளக்கம்</th></tr>
<tr><td>வளைத்தல்</td><td>பொதுவாக முன்புறம் வளைத்தல், ஆனால் ஏதாவது ஒரு சமயம் பின்புறம் வளைத்தல்
உ.த.: கழுத்து, மணிகட்டு, மூட்டு, கை மூட்டு, முட்டி மூட்டு</td></tr>
<tr><td>நீட்டுதல்</td><td>நீட்டுதல் அல்லது பின்புறம் வளைத்தல். உ.த. கழுத்து மணிகட்டு, மூட்டு, கை மூட்டு, முட்டி மூட்டு</td></tr>
<tr><td>தலையை பக்கமாக அப்பால் இழுத்து இயக்குதல் ஒன்று சேர்தல்</td><td>உடலில் நடு பகுதியில் இருந்து அப்பால் நகர்த்தல் உ.த: மணிகட்டு மூட்டு, கைமூட்டு
உடலில் நடு பகுதியை நோக்கி நகர்தல் உ.த. மணிகட்டு, மூட்டு, கை மூட்டு</td></tr>
<tr><td>சுழற்றல்

சுழற்சி</td><td>கூம்பின் வடிவில் ஒரு கால் அல்லது அதன் ஐக்கிய பகுதியை இயக்குவது உ.த: தோள்பட்டை, மூட்டு
எலும்பின் நீண்ட தண்டின் ஒரு அசைவு உ.த: தோள்பட்டைஒ மூட்டு, கழுத்து</td></tr>
</table>
</td><td>செய்துக்காட்டுதல்</td><td>திரும்ப
செய்துகாட்டுதல்</td></tr>
</table>

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்		செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		உள்ளங்கை கீழ் இருக்க கை விரித்தல்	உள்ளங்கை கீழ் நோக்கி திருப்புதல் உ.த.: மணி கட்டு மூட்டு		
		உள்ளங்கை மேல் இருக்க கை விரித்தல்	உள்ளங்கை மேல் நோக்கி திருப்புத்ல் உ.த.: மணி கட்டு மூட்டு		
		நேர்மாறல்	துதிக்காலை உட்புறமாக திருப்புதல் உ.த: கணுக் கால் மூட்டு		
2.2	நோயாளியை தொடர்பு கொள்ள கற்பிக்கும் சிறுபுத்தகத்தின் முக்கயத்துவத்தை அறிந்து கொள்ளுதல்	**தொடர்ப் கொள்ளும் திறமைகள்:** சரியான முறையில் பக்கவாத நோயாளியுடன் தொடர்பு கொள்ள வழியானது எதுவென்றால் - **தொடர்பு கொள்வது பற்றிய புத்தகங்களை பயன்படுத்தல்** **நோக்கங்கள்:** ➢ தொடர்பாற்றலை மேம்படுத்துவது ➢ நோயாளியின் தேவைகளை கண்டறிதல் இது தான் தொடர்பு கொள்ளும் சரியான வழிமுறையாகும் அதாவது ஏறத்தாழ 6”x5.5” அளவுடன் முன்கூட்டியே செய்யப்பட்டதாகும். இதில் படங்கள் கானப்படும் உபயோகிப்பவர்கள் இப்படங்களை கைவிரல்களாலும் எழுத்தாணி மூலமும் படங்களை சுட்டிக்காட்டி தேர்வு செய்வார்கள். தலைப்புகள் என்னவென்றால்: ஆம்/இல்லை, என்னைப்பற்றி, கேள்விகள், எழுத்துக்களை கொண்ட பலகை, கருத்துகள், அடிப்படை		பவர்பாயின்ட் மூலம் கற்பித்தல்	கவனித்தல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		தேவைகள், உணர்வுகள், செயல்கள், தனிப்பட்ட பாதிகாப்பு, சூடான மற்றும் குளிர்ந்த பானங்கள், பலசரக்கு வாங்குதல், துரித உணவுகள், உடல் நலம் மற்றும் அழகு சாதன பொருட்கள், விருந்தாளிகள், இடங்கள், உணவு தேர்வுகள் மற்றும் இன்னும்! கூடுதல் வெற்று பக்கங்கள் உங்களுடைய சொந்த சொல்கராதி கொண்டிருக்கும். **பொறுப்பாளரின் பங்கு:** ➢ சுயமரியாதை மேம்படுத்த உதவும் போது கண்ணுக்கு கண் தொடர்பு கொள்ள வேண்டும். ➢ தகவல்களை பரிமாறும் போது வாய்மொழி சொற்கள் மற்றும் சொல்லிலா குறிப்புகள துணை கொள்ள வேண்டும். ➢ நோயாளியின் தேவைகளை உடனடியாக பூர்த்தி செய்ய வேண்டும். ➢ நோயாளியின் ஒத்துழைப்பை பெற செயல்முறைகளை விளக்க வேண்டும். ➢ நோயாளியை பராமரிக்கும் போதும் உளவியல் நல் வாழ்வை மேம்படுத்த வெறுப்புற்றா முக பாவனைகளை தவிர்க்க வேண்டும். ➢ அன்பான பாதுகாப்பை வழங்க வேண்டும்.		
2.3	உணவு சிகிச்சையை	**உணவு சிகிச்சை வழங்கும் போது அதில் அடங்க வேண்டிய உணவு நுட்பங்கள் (குடல் குழாய், வாய்வழி, சுயமாக உணவு உட்கொள்ளும்**	பவர்பாயின்ட் மூலம் கற்பித்தல்	கவனித்தல்

<table>
<tr><th>வ.எண்.</th><th>பங்கேற்கும் குறிக்கோள்</th><th>பொருளடக்கம்</th><th>செவிலிய ஆய்வாளர்</th><th>பங்கேற்பாளரின் செயல்பாடு</th></tr>
<tr><td></td><td>குறிப்பிடு</td><td>முறை)
ஆரோக்கியமான உணவு முறை மூன்று ஆபத்து காரணிகளை குறைக்க உதவுகிறது - அதிக கொழுப்பு சத்து அளவு, அதிக இரத்த அழுத்தம் மற்றும் அதிகபடியான உடல் எடை.
<table><tr><th>உட்கொள்ள வேண்டிய உணவு</th><th>தவிர்க்க வேண்டிய உணவு</th></tr><tr><td>➢ குறைந்த அளவு உப்பு சேர்த்தல் (2g/day)
➢ பருப்பு வகைகள்
➢ ஈரபதமான கொழுப்புள்ள எண்ணெய் (ப்யுபா எண்னெய், அரிசு தவிடு எண்ணெய்)
➢ பழங்கள் & காய்கறிகள் 5 அல்லது அதற்கு மேல் உட்கொள்ளுவதால் பக்கவாதத்திற்கான அபாயத்தை குறைக்கிறது.
➢ மீன் – வாரத்திற்கு 2 முறை
➢ பால் - கால்சியம் நிறைந்த உணவு
➢ பச்சை மற்றும் மஞ்சள் நிற காய்கறிகள் – ஆக்ஸிஜன் ஏர்றம் பாக்கவாதத்திலிருந்து</td><td>➢ சிவப்பு நிற இறைச்சி (ஆட்டிறைச்சி மற்று மாட்டிறைச்சி)
➢ பால் பொருட்கள் (நெய் & வெண்ணெய்)
➢ முட்டையிலுள்ள மஞ்சள் கரு
➢ ஈரப்பதமான கொழுப்பு நிறைந்த எண்ணெய் (பாமாயில், வனஸ்பதி, டால்டா)
➢ <u>மற்றவை:</u>
❖ மது
❖ புகையிலை- நிக்கோட்டின் பொருட்கள் (சிகரெட், பீடி, குட்கா, மூக்குப் பொடி, புகையிலை இலைகள்)</td></tr></table></td><td></td><td></td></tr>
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வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		பாதுகாக்கிறது		
2.4	மூக்கு மற்றும் இரைப்பை வழியாக குழாய் மூலம் உணவு செலுத்துவதை செய்துகாட்டுதல்	**மூக்கு மற்றும் இரைப்பை வழியாக குழாய் மூலம் உணவு செலுத்துவது:** ➢ நோயாளிகளுக்கு செயல்முறையை விளக்குவது ➢ படுக்கைக்கு பக்கத்தில் பொருட்களை வைத்தல் ➢ அரை அமர்ந்த நிலையில் நோயாளியை நிலைப்படுத்த வேண்டும் ➢ பொறுத்தப்பட்ட குழாயை சரிபார்த்தல் ➢ பொறுத்தப்பட்ட குழாயின் முடிவில் சிரிஞ்சை பொறுத்தி உள்ளிருக்கும் வாயுவை உறுஞ்சி வெளியெடுக்க வேண்டும். ➢ குழாயின் நுணியை தண்ணீர் நிறைந்த கிண்ணத்தில் வைத்து அதில் குமிழிகள் வருகிறதா என்று கண்காணிக்க வேண்டு. நுரையீரலில் வாயு குமிழிகள் இருப்பதை அது உணர்த்தும். ➢ உட்செலுத்தும் உணவின் வெப்பநிலைய சரிபார்க்க வேண்டும். ➢ 60 மி.லி சிரிஞ்சை குழாயில் பொறுத்தி அதனுடன் உணவு செலுத்தும் குழாயை பொறுத்தவும். ➢ நோயாளியின் தலையிலிருந்து 45 செ.மீ உயரமான நிலையில் அந்த உணவு குழாய் இருத்தல் வேண்டும், ➢ அந்த உணவு குழாயை உபயோகப்படுத்தும் முன்னரும், பின்னரும் 15–30மி.லி தண்ணீரினால் கழுவ வேண்டும். ➢ குழாயினுள் காற்று உள்ளேறுதலை தவிர்க்க வேண்டும்.	செய்துகாட்டுதல்	செயல்பாடுகளை நோக்குதல் மற்றும் திரும்ப செய்துகாட்டுதல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		➢ மருந்தின் திடத்தை குறைக்க பல விதமான அளவு கொண்ட தண்ணிரை உபயோகப்படுத்த பரிந்துரைக்க படுகிறது அதில் 10-30மி.லி & 60-90மி.லி வரை. ➢ சிரிஞ்சை அகற்றி அந்த குழாயை மூட வேண்டும். ➢ வசதியான நிலையை நோயாளிக்கு வழங்க வேண்டும் ➢ அடிக்கடி வாயை கழுவுதல் அவசியம். ➢ முறையற்ற முறையில் மூச்சு குழாய் மூலமாக உணவு வழங்கினால் மூச்சிரைப்பு ஏறப்டுத்தும்.		
2.5	நோயாளியை தூக்குதல் மற்றும் படுக்கையிலிருந்து சக்கர நாற்காலிக்கு மாற்றுதல் காட்டுதல்	**படுக்கையிலிருந்து சக்கர நாற்காலிக்கு தூக்கி மாற்றுதல்:** **நோக்கங்கள்:** ➢ உயர்த்தும் போதும் மாற்றும் போதும் காயம் ஏற்படாமல் இருக்க. ➢ விறைவில் உடல் அசைவுகளை உண்டாக்க. **பொறுப்பாளரின் பங்கு:** ➢ நோயாளிகளுக்கு செயல்முறைய விளக்க வேண்டும். ➢ நாற்காலி (அல்லது) சக்கர நாற்காலியை படுக்கைக்கு ஏற்ப நிலலப்படுத்த வேண்டும். நாற்காலியை படுக்கைக்கு இணையாகவும் மற்றும் தலை (அல்லது) படுக்கையின் கால் பகுதியை பார்பதுபோல் வைத்தல். ➢ முதலில் நோயாளியை பலவீனமான கையை பிடித்து கொண்டு அதன்பின் அதற்கு எதிரான முழங்காலை வளைக்க சொல்ல	செய்துகாட்டுதல்	செயல்பாடுகளை நோக்குதல் மற்றும் திரும்ப செய்துகாட்டுதல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		வேண்டும். ➢ நோயாளியின் இடுப்பை ஒரு கை கொண்டும் மறு கையால் நோயாளியின் தோள்பட்டையை பிடித்துக் கொள்ள வேண்டும். ➢ நோயாளிக்கு அவசியமான வழியை காட்டி உங்களை நோக்கி உருள சொல்ல வேண்டும். ➢ நோயாளியை அவர்களுடைய பலம் பொருந்திய காலை கொண்டு தங்களுடைய பலவீனமான காலை படுக்கையின் விளிம்பிற்கு கொண்டு வர சொல்ல வேண்டும். ➢ நோயாளியின் இடுப்பை திடப்படுத்தி நாற்காலியில் தள்ளி உட்கார சொல்ல வேண்டும். ➢ நோயாளி படுக்கையில் உட்புறமாக உட்கார்ந்து இருந்தால் அவர்களின் கீழ்ப்பகுதியை அசைத்து நகர்த்த வேண்டும். ➢ நோயாளி தனது பலமான கையால் நாற்காலி (அல்லது) சக்கர நாற்காலியின் பிடியின் மேல் வைக்க வேண்டும். ➢ 1,2,3 என்று எண்ணிக்கையை கூறி நோயாளியின் மாறும் நேரத்தை ஏற்படுத்த வேண்டும். ➢ நோயாளியை மாற்றுவதற்கு அவர்களை முன் புறமாக கால் முட்டியை மையமாக கொண்டு சாய்து அவர்களுடைய பிட்டத்தை நாற்காலியின் மேல் கொண்டு வர வேண்டும். ➢ நோயாளியை நாற்காலியில் உட்புறமாக சரியாக உட்கார உதவி செய்ய வேண்டும்.		

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		➢ தட்டையான பிளேட்டுகள் பாதுகாப்பாக இருப்பதை உறுதிபடுத்திக் கொள்ள வேண்டும். ➢ நோயாளி சுகமாக இருக்கிறாரா அல்லது இல்லையா என்று கேட்க வேண்டும்.		
2.6	பின்புற பராமரிப்பை அறிதல்	**சுகாதாரம் (பின்புற பராமரிப்பு, மலம் கழிதல், குளித்தல், சீர்படுத்துதல், மற்றும் பொருத்துவது):** **பின்புற பராமரிப்பு:** **பொருள்:** பின்புற பராமரிப்பு என்பது பின்புறத்தை சுத்தம் மற்றும் மசாஜ் செய்வதாகும். **நன்மைகள்** ➢ படுக்கைப்புண் ஏற்படாமல் தடுக்க. ➢ சுழற்சியை மேம்படுத்த & சோர்விலிருந்து விடுபட. **நடைமுறை:** ➢ செயல்முறையை நோயாளிக்கு விளக்க வேண்டும். ➢ முதலில் நோயாளியை பக்கவாட்டு நிலையில் பின்பகுதி பொறுப்பாளரை நோக்கி இருக்க செய்ய வேண்டும். ➢ நோயாளிக்கு தனியுரிமை வழங்க வேண்டும். ➢ ஆடைகளை அகற்றி அவர்களின் பின்புறத்தை தோள் பட்டையிலிருந்து பிட்டம் வரை வெளிப்படுத்த வேண்டும். ➢ ஈரமான துணியை கொண்டு அவர்கள் பின்புறத்தை	செய்துகாட்டுதல்	செயல்பாடுகளை நோக்குதல் மற்றும் திரும்ப செய்துகாட்டுதல்

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		தோள்பட்டையிலிருந்து பிட்டம் வரை சுத்தல் செய்ய வேண்டும். ➢ சுழற்சி முறையில் பின்புறத்தை சோப்பிட வேண்டும். ➢ நீரினால் சோப்பை சுத்தமாக கழுவி துவாலை கொண்டு உலர்த்த வேண்டும். ➢ லோஷனை கையில் எடுத்துக் கொண்டு அவற்றை உள்ளங்கை முழுவதும் குழைத்து கொள்ள வேண்டும். ➢ பின்புறத்தில் லோஷனை இட வேண்டும் முதலில் பிட்டத்தில் இருந்து ஆரம்பித்து மென்மையாக்கி தோள்பட்டை நோக்கி இட வேண்டும். ➢ பிட்டத்திலிருந்து தோள்பட்டை வரை மசாஜ் செய்ய வேண்டும். ➢ 3 நிமிடங்கள் வட்ட இயக்கமாக செய்ய வேண்டும். ➢ பதமாக 3 நிமிடங்கள் மசாஜ் செய்ய வேண்டும். ➢ 3 நிமிடங்கள் மெதுவாக தட்ட வேண்டும். ➢ 2–3 நிமிடங்கள் உராய்வை ஏற்படுத்த வேண்டும். ➢ பாதுகாப்பாளர்கள் வசதியான நிலையில் நோயாளியை ஓய்வெடுக்கவோ (அல்லது) தூங்கவோ உதவி செய்ய வேண்டும்.		
2.7	நோயாளியை நிலைப்படுத்துதலை செய்துக்காட்டுதல்	**நிலைப்படுத்துதல்:** 2 மணி நேரத்திற்கு ஒரு முறை நோயாளியின் நிலையை மாற்ற வேண்டும்.	செய்துகாட்டுதல்	செயல்பாடுகளை நோக்குதல் மற்றும் திரும்ப செய்துகாட்டுதல்

<table>
<tr><th>வ.எண்.</th><th>பங்கேற்கும் குறிக்கோள்</th><th>பொருளடக்கம்</th><th>செவிலிய ஆய்வாளர்</th><th>பங்கேற்பாளரின் செயல்பாடு</th></tr>
<tr><td></td><td></td><td>
நன்மைகள்:

ஆறுதல் வழங்க
படுக்கைப்புண்ணை தவிர்க்க

<table>
<tr><th>நிலையின் வகைகள்</th><th>செய்முறை</th><th>நிலை</th></tr>
<tr><td>பின்புறமாக் படுத்தல்</td><td>தட்டையான நிலையில் படுக்க வேண்டும்
தலையானது மைய பகுதியில் இருத்தல் வேண்டும்.
துவாலை கொண்டு தலையை நடுவில் நிலைப்படுத்த வேண்டும்
பலவீனமான தோள் பட்டை மற்றும் கையின் கீழே தலையனை வைக்கலாம்.
பலவீனமான காலை நடு நிலையில் இருப்பதை உறுதி படுத்தி கொள்ள வேண்டும். அவைகள் சுழலக் கூடாது. தலை அணை கொண்டு கால்களை பிடித்துக் கொள்ள வேண்டும்.</td><td>  </td></tr>
<tr><td>பாதிக்கப் படாத பக்கத்தில் படுப்பது</td><td>நோயாளி உங்கள் பக்கமாக உருளுவதை உறுதிப்படுத்தி கொள்ள வேண்டும்.
தலையானது ஆதரவான நிலையில் மற்றும் நல்ல சீரமைப்புடன் இருப்பதை</td><td>  </td></tr>
</table>
</td><td></td><td></td></tr>
</table>

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்			செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
			உறுதி செய்யுங்கள். ➢ பலவீனமான கையின் அடியில் தலை அணை வைக்க வேண்டு. ➢ பாதிக்கப்பட்ட முழங்காலை வளைத்து அதனடியில் தலையணை வைக்க வேண்டும்.			
		பாதிக்கப் பட்ட பக்கத்தில் படுத்தல்	➢ நோயாளியை திருப்புவதற்கு முன்னர் பாதிக்கப்பட்ட கை தூரமாக வைத்து அதனை உறுதி செய்ய வேண்டும். ➢ நோயாளியை பலவீனமான பக்கத்தில் உருள செய்து அவர்களின் பின்புறம் தலை அணை மீது ஒட்டி இருத்தல் வேண்டும். ➢ பலமில்லாத தோளை முன் புறமாக சாய்க்க வேண்டும். ➢ இரு கால்களின் இடையில் தலையணை வைக்க வேண்டும்.			
		நாற்காலியில் உட்கார்ந்த நிலையில்	➢ நோயாளி சரியாமல் இருப்பதை உறுதி செய்ய வேண்டும். ➢ நாற்காலியில் நன்றாக உட் புறமாக அமர வைக்க வேண்டும். ➢ ஒரு பக்கமாக சாய்வதை தவிர்க்க வேண்டும்.			

வ.எண்.	பங்கேற்கும் குறிக்கோள்	பொருளடக்கம்	செவிலிய ஆய்வாளர்	பங்கேற்பாளரின் செயல்பாடு
		➢ பலவீனமான கையின் கீழ் தலையனை வைக்க வேண்டும். ➢ தரையில் அவர்களின் கால் தட்டையாக இருப்பதை உறுதி படுத்த வேண்டும். ➢ துவாலை (அல்லது) மெத்தையை பலவீனமான பக்கத்தில் வைக்க வேண்டும். 		
2.8	அறிவாற்றல் வளர்ச்சியை விவரித்தல்	**அறிவாற்றல் வளர்ச்சி:** மூளை பயிற்சியான வார்த்தை சிக்கல்கள், நினைவாற்றல் சிக்கல்கள், கணிதம், புதிர்கள் மூளையை அன்றாடம் தூண்டுவதன் மூலம் தனி நபரின் அறிவாற்றல் மேம்படவும் வளர்ச்சி அடையவும் உதவுகிறது.	பவர்பாயின்ட் மூலம் கற்பித்தல்	கவனித்தல்
	முடிவுரை	**முடிவுரை:** பக்கவாத சீரமைப்பின் இல்லானது சீராக அமைக்கப்பட்ட பாடத்திட்டதின் மூலம் இழந்த அன்றாட செயல்பாடுகளை குறுகிய காலத்தில் திரும்ப பெறுவதாகும். பக்காவாத நோயாளியின் தேவைக்கேற்ப பொறுபாளர்கள் சீரமைப்பு நுட்பத்தை தேர்வு செய்ய வேண்டும். இந்த சீரமைப்பு நுட்பமானது அவர்கள் பாதுகாப்பாகவும், சுதந்திரமாகவும், சந்தோஷமாகவும் வாழ வழி செய்தோடு அவர்களின் சுயநம்பிக்கை, சுய உருவம் மற்றும் சுயமாக பராமரிக்கும் முறைகளை மேம்படுத்துகிறது.		

పక్షవాత పునరావాస కార్యక్రమం

యొక్క

పాఠ్యాంశం

పక్షవాత పునరావాస కార్యక్రమం యొక్క పాఠ్యాంశం

విషయము	:	**పక్షవాత పునరావాస కార్యక్రమం**
గుంపు	:	**పక్షవాత** రోగి సమ్రక్షకులు
స్థలము	:	స్ట్రోక్, న్యూరో వార్డులు మరియు స్టెప్ డౌన్ ఐ.సి.యు
వ్యవధి	:	1 గంట 30 **నిమిషాలు**
పద్ధతి బోధన	:	లెక్చర్ కమ్ చర్చ, ప్రదర్శన
బోధకుడు	:	**పరిశోధకురాలు**
సూచన ఎయిడ్	:	పవర్ పాయింట్ బోధన, పుస్తకం

ప్రధాన లక్ష్యం : **పక్షవాత పునరావాస కార్యక్రమం** యొక్క ముగింపులో రోగి సమ్రక్షకులు ,**పక్షవాత పునరావా సం గురించి అవగహన** మరియు అనుసరణ పొందిఉండవలెను

ప్రత్యేకమైన లక్ష్యాలు : **పక్షవాత పునరావాస కార్యక్రమం** యొక్క ముగింపులో రోగి సమ్రక్షకులు వీటిని చేయగలరు-

- **పక్షవాత** నిర్వచనం
- **పక్షవాత** ప్రమాద అంశాలు మరియు కారణాలు యొక్క జాబితా
- హెచ్చరిక చిహ్నాలు మరియు వైద్య వ్యక్తీకరణలు గుర్తించడానికి
- **పక్షవాత** యొక్క చికిత్స ఎంపిక చేయడం
- **పక్షవాత** సమస్యలు పేర్కొనండి
- **పక్షవాత** పునరావాస అవలోకనం వివరించేందుకు
- చలన వ్యాయామాలు పరిధి ప్రదర్శించేందుకు
- కమ్యూనికేషన్ బుక్లెట్ ప్రాముఖ్యతను గుర్తించడం
- **పక్షవాత** యొక్క ఆహారం ప్రస్తావన
- ట్యూబు ద్వారా ఆహారమిచ్చు పద్దతులు తెలుపడం .
- వెనుక భాగం సంరక్షణ **ప్రక్రియ** వివరించండం
- **పక్షవాత** రోగిని మంచం పై నుంచి చక్రాల బండిలోకి బదిలి చేయడం
- **పక్షవాత** యొక్క స్థానాలు ప్రదర్శించడం
- **పక్షవాత** రోగి అభిజ్ఞా అభివృద్ధి వివరించడం.

వరుస సంఖ్య	లక్ష్యం	సమాచారం	నర్సు పరిశోధకురలు	రోగి సమ్రక్షకులు పని
		పరిచయము: అంతర్జాతీయంగా ప్రతి సంవత్సరం 20 మిలియన్ ప్రజలు పక్షవాతం కారణంగా బాధపడుతున్నారు.12.7 మిలియన్ల కంటే ఎక్కువశాతం పక్షవాతం రావడానికి అధిక రక్తపోటు దోహదం చేస్తుంది, 5 మిలియన్ల ప్రజలు ప క్షవాతం పర్యవసానంగా చనిపోతున్నారు మరియు 10 మిలియన్ల ప్రజలు జీవించగలుగుతున్నారు.వీరిలో ఐదు మిలియన్ల ప్రజలకు పక్షవాతం వలన ఏ పని చేయలేని పరిస్థితి ఏర్పడుతుంది. పక్షవాత పునరావాస కార్యక్రమం రోగి కోల్పోయిన నైపుణ్యాలను మరలా నేర్చుకోవడంలో సహాయపడుతుంది. ఈ కార్యక్రమంలో పాల్గొనడం వలన రోగి కోల్పోయిన స్వాతంత్రాన్ని తిరిగి సంపాదించుకోవడంలో మరియు తన జీవితం యొక్క నాణ్యతను మెరుగుపరిచేందుకు దోహదం చేస్తుంది . రోగి సమ్రక్షకులు రోగికి అవసరమైన ఏర్పాట్లు అందించడంలో మరియు సాధారణ జీవన నైపుణ్యాలను శిక్షణ అందించడంలో ముఖ్య పాత్ర పోషిస్తున్నారు.	పవర్ పాయింట్ ప్రెజెంటేషన్ తొ కూడిన ఉపన్యాసం మరియు చర్చ	రోగి సమ్రక్షకులు వింటున్నరు
	పక్షవాత నిర్వచనం	**పక్షవాతం** మెదడుకి అకస్మాత్తుగా రక్తసరఫరా ఆగిపోవడం వలన మెదడు పనితీరు కోల్పోతుందన్నమాట అందువలన పక్షవాతం సంభవిస్తుంది	పవర్ పాయింట్ ప్రెజెంటేషన్ తొ కూడిన ఉపన్యాసం మరియు చర్చ	రోగి సమ్రక్షకులు వింటున్నరు

	పక్షవాత ప్రమాద అంశాలు మరియు కారణాల జాబితా	**ప్రమాద కారకాలు:** ❖ ఊబకాయం (శారీరక శ్రమ లేకపోవడం) ❖ ధూమపానం ❖ అధిక మద్యపానం ❖ నియంత్రణలో లేని రక్తపోటు ❖ మధుమేహం ❖ కర్ణిక దడ, ధాతు, హృదయ కవాటం అసాధారణత, గుండె పుట్టుకతో వచ్చిన దోషము వంటి గుండె జబ్బులు. **కారణాలు**: ➢ **రక్త సరఫరా నిలిచిపోవడం-** గడ్డకట్టిన రక్తము యొక్క భాగము రక్తనాళంలో ఇరుక్కుపోవడం వల్ల మెదడు కణజలానికి రక్త సరఫరా నిలిచిపోతుంది. ➢ **రక్తంగడ్డకట్టడం-** ధమనిలో కొవ్వుచేరడం వల్ల అది కుదించుకుపోవటం జరిగి, రక్తం గడ్డకట్టడానికి కరణమౌతుంది అందువలన రక్తము వెళ్ళే మార్గంలో ఆటంకం ఎదురవుతుంది. ➢ **రక్తస్రావం-** రక్తనాళికలో అకస్మాతుగా పేలుడు జరగడం వల్ల రక్తం మొత్తం ఒక్కసారిగా మెదడుకణజాలంలోకి ప్రవేశించి మెదడుకి హాని కలుగజేస్తుంది	పవర్ పాయింట్ ప్రెజెంటేషన్ తో కూడిన ఉపన్యాసం మరియు చర్చ	రోగి సమ్రక్షకులు వింటున్నారు

	హెచ్చరిక చిహ్నాలు మరియు వైద్య లక్షణాలను గుర్తించడానికి	**హెచ్చరిక చిహ్నాలు:** ➢ తెలియని కారణం తో ఆకస్మికంగా తీవ్రమైన తలనొప్పి ➢ అకస్మాత్తుగా బలహీనత (లేదా) శరీరం యొక్క ఒక వైపున అనగా ముఖం ఒక వైపు, ఒక చేయి, ఒక కాలు తిమ్మిరిగా ఉండడం ➢ మాట్లాడలేక పోవడం (లేదా) మాటలు తడబడడం. ➢ ఆకస్మికంగా కళ్ళు మసకగా కనిపించడం (లేదా) ముఖ్యంగా ఒక కంటిలో దృష్టి కోల్పోవడం ➢ అకారణంగా మైకము, సరిగ్గా నిలుచుకోలేకపోవడం (లేదా) ఆకస్మికంగా పడిపోవడం. **వ్యాధి లక్షణాలు:** ➢ కుడి వైపు మెదడు దెబ్బతినడం- రోగికి ఎడమ వైపు బలహీనత కలిగి ఉండవచ్చు ➢ ఎడమ వైపు మెదడు దెబ్బతినడం- రోగికి కుడివైపు బలహీనత కలిగి ఉండవచ్చు. ➢ బలహీనత శరీరంలో ఒక వైపు కాని, పై రెండు చేతులుకు కాని, క్రింది రెండు కాళ్ళకు (లేదా) మొత్తం నాలుగు అవయవాలకు రావచ్చు. ➢ సరిగ్గా మాట్లడలేకపోవడం.	పవర్ పాయింట్ ప్రెజెంటేషన్ తో కూడిన ఉపన్యాసం మరియు చర్చ	రోగి సమ్రక్షకులు వింటున్నారు

		➢ సరిగ్గా రాయలేకపోవడం. ➢ జ్ఞాపక శక్తి తగిపోవడం మరియు సరిగ్గా నిర్ణయాలు తీసుకులేకపోవడం ➢ మ్రింగుట కష్టంగా ఉండడం ➢ ఒక వైపు సరిగ్గా వినిపించకపోవడం. ➢ కండరాల లో బలము తగ్గిపోవడం. ➢ నాడీప్రచోదనంలో మార్పులు ➢ మూత్రం సరిగ్గా రాకపోవడం(లేదా)ఆపుకోలేని పరిస్థితి రావడం ➢ స్పరశానుభూతి తగ్గిపోవడం		
	పక్షవాత యొక్క చికిత్స ఎంపిక చెసుకొగలగడం	**నిర్వహణ:** ➢ తక్షణం ఆసుపత్రిలో చేర్పించడం ➢ కారణం ఆధారంగా వైద్యం (లేదా) శస్త్ర చికిత్స చేయడం ➢ ఫిజియోథెరపీ చేయించడం ➢ పునరావాస చర్యలు	పవర్ పాయింట్ ప్రెజెంటేషన్ తొ కూడిన ఉపన్యాసం మరియు చర్చ	రొగి సమ్రక్షకులు వింటున్నరు

	పక్షవాత యొక్క సమస్యలు పెర్కొనండి	**పక్షవాతం యొక్క సమస్యలు:**			పవర్ పాయింట్ ప్రెజెంటేషన్ తొ కూడిన ఉపన్యాసం మరియు చర్చ	రొగి సమ్రక్షకులు వింటున్నరు
		ప్రారంభ సమస్యలు (7 రోజుల సమయంలో వచ్చేవి)	**ఆలస్య సమస్యలు(7 రోజుల సమయం తరువాత వచ్చేవి).**			
		➢ మెదడువాపు(96గంటలలోపు వస్తుంది) ➢ మెదడులో రక్తం గడ్డకట్టడం విస్తరించడం ➢ రక్తం గడ్డకట్టిన ప్రదేశం నుండి రక్తస్రావం జరగడం ➢ హఠాత్తుగా మూర్ఛ కలుగుట ➢ ఊపిరి తిత్తులలోనకి పదార్థములు పోయినందు వలన వచ్చే జబ్బులు రావడం ➢ జీర్ణాశయములోపుండ్లు ఏర్పడుట లేదా రక్తస్రవం జరుగుట ➢ అంతర్నాళాల్లో రక్తం గడ్డకట్టడం మరియు ఊపిరి తిత్తులలో రక్తము గడ్డకట్టి,	➢ మళ్ళీ పక్షవాతం రావడం ➢ హఠాత్తుగా మూర్ఛ కలుగుట ➢ ఊపిరి తిత్తులలోనకి పదార్థములు వచ్చే జబ్బులు రావడం ➢ అంతర్నాళాల్లో రక్తం గడ్డకట్టడం మరియు ఊపిరితిత్తులలో రక్తము గడ్డకట్టి రక్త ప్రసరణకు ➢ వెనుక భాగంలో పుండ్లు రావడం ➢ జ్ఞానశక్తి మరియు భాషా శక్తి నశి ➢ కండరాలు కుదించుకుపోవడం ➢ మనోవ్యాకులత ➢ కదిపే శక్తిని కోల్పోవడం			

		రక్తప్రసరణకు అడ్డు తగులుట గుండె కండరాల విచ్ఛిన్నత (మైయోకార్డియల్ ఇన్ఫ్రాక్షన్).			
	పక్షవాత పునరావాస అవలోకనం వివరించెందుకు	<u>పక్షవాత పునరావాస కార్యక్రమం - సంరక్షకుల పాత్ర</u> **అర్థం** పక్షవాత పునరావస కార్యక్రమం అతి తక్కువ సమయంలో రోగి కోల్పోయిన శక్తిని తిరిగి నేర్చుకోవడంలో ఒక నిర్దిష్టమైన మరియు వ్యవస్థీకృతమైన ప్రణాళిక అందిస్తుంది. **లక్ష్యం** పునరావస కార్యక్రమం రోగి,యొక్క శారీరకమైన, జ్ఞానపరమైన మరియు ఇంద్రియ సామర్థ్యాల పునరుద్ధరణకు సహాయపడుతుంది. **వ్యవధి :** సాధారణంగా రోగి పునరావాస కేంద్రంలో రెండు నుండి మూడు వారాల వరకు ఉండవలసి వస్తుంది.ప్రతి రోజు కనీసం మూడు గంటల సమయం పాటు ఈ కార్యక్రమంలో క్రీయాశీల చికిత్స ఉంటుంది.ఈ విధంగా వారంలో ఐదు నుండి ఆరు రోజుల పాటు చికిత్స ఉంటుంది.	పవర్ పాయింట్ ప్రెజెంటేషన్ తొ కూడిన ఉపన్యాసం మరియు చర్చ	రొగి సమ్రక్షకులు వింటున్నరు

		అంశములు: పక్షవాత పునరావాస కార్యక్రమంలోని అంశములు_ ❖ చలన వ్యాయామాలు మరియు సహాయక పరికరాలు తో నడిపించడం ❖ సంభాషణా నైపుణ్యములు నేర్పించడం ❖ ఆహారం ❖ ట్యూబు ద్వారా ఆహారమిచ్చు పద్ధతులు తెలుపడం ❖ మంచం పై నుంచి చక్రాల బండిలోకి బదిలి చేయడం ❖ స్థాన చలనము మరియు వ్యక్తిగత పరిశుభ్రత.		
	చలన వ్యాయామాలు ప్రదర్సించడం	**చలన వ్యాయామాలు :** **అర్థం:** చలన వ్యాయామాలు చేయడం ద్వారా అన్ని కీళ్ళను సాధారణ పరిధిలో కదిలించగలుగుతాం **ప్రయోజనాలు**: • **నిర్ణీత సమయాని కంటే ముందు నడిపించగలగడం** • **కీళ్ళూ వంగకుండా ఉండే స్థితిని తగ్గించడం** • రక్తనాళాల్లో **మరలా రక్తము గడ్డకట్టకుండా నివారించవచ్చు**	పద్ధతిని పరిశీలిస్తున్నారు	రోగి సమ్రక్షకులు పరిశీలిస్తున్నరు

వ్యాయామం	వివరణ
వంచడము	సాధారణంగా ముందుకు వంచటం కానీ, అప్పడప్పడు వెనుకకు వంచడం ఉదా: మెడ, మణికట్టు కీలు, మోచేయి కీలు, మోకాలికీలు, తుంటి కీలు లేక కలయిక సంధి, కాలి చీలమండ కీలు
విస్తరించడము	నిఠారుగా చాపడం (లేదా)వెనుకకు వంచడం ఉదా: మెడ, మణికట్టు కీలు, మోచేయి కీలు, మోకాలికీలు
అపహరణము	దూరంగా శరీరం యొక్క మధ్య రేఖ నుండి కదలిచడం ఉదా: మణికట్టు కీలు, మోచేయి కీలు
అభివర్తనము	శరీరం యొక్క మధ్య రేఖ వైపు కదలిచడం ఉదా: మణికట్టు కీలు, మోచేయి కీలు
వర్తులావర్తనము	శంఖు ఆకారంలో ఒక అవయవాన్ని (లేదా) వ్రేళ్ళను కదిలించడం ఉదా: భుజం కీలు
భ్రమణము	ఒక ఎముక యొక్క దీర్ఘ అక్షం చుట్టూ కదిలించడం ఉదా: భుజం కీలు, మెడ
అవతాననము	అరచేయి క్రిందికి తిప్పడం ఉదా:మణికట్టు కీలు
ఉత్తాననము	అరచేయి పైకి తిప్పడం ఉదా:మణికట్టు కీలు

	సంభాషణ పుస్తకం ప్రాముఖ్యతను గుర్తించడం	<table><tr><td>వ్యుత్క్రమము</td><td>పాదమును లోపలికి తిప్పడం ఉదా: కాలి చీలమండ కీలు.</td></tr><tr><td>బహిర్వర్తనము</td><td>పాదమును బయటికి తిప్పడం ఉదా: కాలి చీలమండ కీలు</td></tr></table> భావప్రసార నైపుణ్యం: పక్షవాత రోగితో సంభాషించడానికి ప్రభావవంతమైన మార్గం- సంభాషణాపుస్తకం **ప్రయోజనాలు:** ❖ సంభాషణానైపుణ్యం మెరుగుపరిచేందుకు ఉపయోగపడుతుంది. ❖ రోగి యొక్క అవసరాలను గుర్తించడానికి సహాయపడుతుంది. ఈ పుస్తకం సంభాషణ మెరుగుపరచడానికి ఉత్తమ మార్గం. ఇందులో ముందుగానే చిత్రించిన చిత్రాలు ఉంటాయి. వినియోగదారులు తాము ఎంచుకున్న చిత్రాన్ని సూచించడానికి ఒక వేలు లేదా చిన్నపాటి కర్రను ఉపయోగించవచ్చు. ఈ పుస్తకపరిమనం సుమారు 6"x5.5" ఉంటుంది. **ఇందులో పొందుపరచిన విషయాలు:** అవును/కాదు సమాధానాలు, ప్రశ్నపదాలు కలిగిన ప్రశ్నలు, అక్షర క్రమం ఉన్న బోర్డులు, వ్యాఖ్యలు, ప్రాథమిక అవసరాలు, భావాలు, కార్యకలాపాలు, వ్యక్తిగత రక్షణ, వేడి మరియు చల్లని పానీయాలు, కిరాణా వస్తువులు ,తినుబండారాలు , ఆరోగ్యము మరియు అందానికి సంబందించిన వస్తువులు , ప్రదేశాలు, భోజనం ఎంపికలు మరియు మరింత! అదనపు ఖాళీ పేజీలు మీ స్వంత పదజాలం రాయడానికి కలిగి ఉంటుంది. సంరక్షకుల పాత్ర:		

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రోగి యొక్క ఆత్మ విశ్వాసం పెంపొందేందుకు సంరక్షణ అందించినప్పుడు మధ్య మధ్యలో వారి కళ్ళను చూస్తూ చేయండి
సంభాషిచడం మరియు సైగలు ద్వారా సమచారాన్ని అందచెయవలెను
రోగి యొక్క అవసరాలకు వెంటనే ప్రతిస్పందించండి
రోగి సహకారం పొందేందుకు మీరు చేసే దాని గురించి వివరించండి
సంరక్షణ అందించినప్పుడు,అసహ్యించుకుంటున్న హావభావాలు నివారించండి
ప్రేమతో సంరక్షణ అందించండి

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<td></td>
<td>పక్షవాత ఆహార ప్రస్తానం</td>
<td>
ఆహారం:
అధిక కొవ్వు స్థాయిలు, అధిక రక్తపోటు మరియు అదనపు బరువు - ఈ మూడు పక్షవాత ప్రమాద కారకాలు తగ్గించడానికి ఆరోగ్యకరమైన ఆహార అలవాట్లు సహాయపడుతుంది
<table>
<tr><th>తీసుకోవలసిన ఆహారపదార్థాలు</th><th>తీసుకోకూడని ఆహారపదార్థాలు</th></tr>
<tr>
<td>

తక్కువ ఉప్పు తీసుకోవడం (2గ్రా/రోజు)
పప్పులు
తక్కువకొవ్వు వున్న నూనెలు (పొద్దుతిరుగుడు నూనె, సోయాబీన ఆయిల్,బియ్యం గోధుమనూనెలు)
పండ్లు మరియు కూరగాయలు ప్రతి రోజు 5

</td>
<td>

మాంసం (మేక మరియు గొడ్డు మాంసం)
పాల ఉత్పత్తులు (నెయ్యి మరియు వెన్న
గుడ్డు యొక్క పసుపు

</td>
</tr>
</table>
</td>
<td>పవర్ పాయింట్ ప్రెజెంటేషన్ తొ కూడిన ఉపన్యాసం మరియు చర్చ</td>
<td>రొగి సమ్రక్షకులు వింటున్నరు</td>
</tr>
</table>

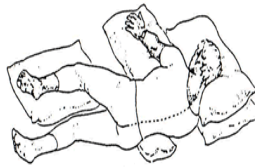
		లేదా ఎక్కువసార్లు తీసుకోండి ఇది పక్షవాత ప్రమాదాన్ని తగ్గిస్తుంది ➢ చేపలు - 2సార్లు/వారం తీసుకోండి ➢ పాలు - కాల్షియం అధికంగాఉండే ఆహారం ➢ తక్కువ ఉప్పు తీసుకోవడం (2గ్రా/రోజు) ➢ పప్పులు ➢ తక్కువకొవ్వు వున్న నూనెలు (పొద్దుతిరుగుడు నూనె, సోయాబీన ఆయిల్, బియ్యం గోధుమనూనెలు) ➢ పండ్లు మరియు కూరగాయలు ప్రతి రోజు 5 లేదా ఎక్కువసార్లు తీసుకోండి ఇది పక్షవాత ప్రమాదాన్ని తగ్గిస్తుంది ➢ చేపలు - 2సార్లు/వారం తీసుకోండి ➢ పాలు - కాల్షియం అధికంగాఉండే ఆహారం	భాగం ➢ ఎక్కువ కొవ్వు నూనెలు (పామాయిల్, డాల్డా) ➢ <u>ఇతరత్రా:</u> ❖ మద్యం ❖ పొగాకు- నికోటిన్ ఉత్పత్తులు (సిగిరెటు, బీడీ, గుట్కా, ముక్కుపొడి, పొగాకు ఆకుల		
	ట్యుబు ద్వారా ఆహారం ఇచ్చు పద్దతులు తెలుపడం	ముక్కుజీర్ణాశయ గొట్టం ద్వారా ఆహారమివ్వడం: ➢ రోగికి మీరు చేసే దాని గురించి వివరించండి ➢ మీకు కావలసిన వాస్తువులను మంచం ప్రక్కన అమర్చండి ➢ ఏటవాలుగా రోగిని కూర్చొనిపేట్టండండి ➢ గొట్టం సరియైన స్థానంలో ఉందా,లేదా పరిశీలించండి- ➢ జీర్ణాశయ పదార్థాలను పొందటానికి గొట్టం చివర భాగన సిరంజిని జోడించి		పద్దతిని పరిశీలిస్తున్నారు	రోగి సమ్రక్షకులు పరిశీలిస్తున్నరు

		మెల్లగా వెనుకకు లాగండి ➢ గిన్నెలోని నీటిలో గొట్టం యొక్క కొన ఉంచండి ఏమైనా బుడగలు వస్తాయా గమనించండి. ఊపిరితిత్తులలో గొట్టం ఉంటే గాలి బుడగలు ఉంటుంది ➢ ఇచ్చే ఆహారం యొక్క ఉష్ణోగ్రతను తనిఖీ చేయండి ➢ ఒక 60మిల్లి సిరంజిని తీసుకోని దాని ప్లంగర్ తొలగించి గొట్టాన్ని కొద్దిగా నులుమి ఉంచుకున్న తరువాత సిరంజిని గొట్టానికి అనుసంధానము చేయండి ➢ గొట్టం ఎత్తు రోగి తల నుండి 45సె.మి.ఉండాలి. ➢ గొట్టం ద్వారా ఆహారం ఇచ్చే ముందు మరియు ఇచ్చిన తరువాత 15-30మి.లి. నిటిని ఇవ్వండి. ➢ గొట్టంలో గాలి చేరకుండా చూడండి ➢ ఔషధాన్నిపలుచనచేయడం, కోసం వివిధ పరిమాణాలు గల నీటిని అంటే 10-30మి.లి. మరియు 60-90మి.లి. వరకు సూచించబడ్డాయి ➢ ఆహారం ఇచ్చిన తరువాత సిరంజిని తొలగించి తిరిగి మూతపెట్టండి ➢ సౌకర్యవంతమైన స్థానం కల్పించండి ➢ తరచుగా నోరు కడగడం అవసరం ➢ గొట్టం ద్వారా ఆహారమిచ్చేట్టప్పడూ సరైన పద్ధతిలో ఇవ్వకపోతే ఆహారం ఊపిరితిత్తులలోకి చేరుతుంది		

	పక్షవాత రోగిని మంచంపై నుంచి చక్రల బండిలోకి బదిలి చెయ్యడం	మంచం పై నుంచి చక్రాల బండిలోకి బదిలి చేయడం: **ప్రయోజనాలు:** ❖ పైకి ఎత్తేటప్పుడూ మరియు బదిలిచేసేటప్పుడు ప్రమదాలు జరిగే అవకాశాన్ని తగ్గిస్తుంది ❖ త్వరగాలేచి నడవడానికి ఉపయోగపడుతుంది సంరక్షకుల పాత్ర: ➢ రోగికి మీరు చేసే దాని గురించి వివరించండి ➢ బెడ్డుకు సమాంతరంగా బెడ్ కుర్చీ ఉంచండి ➢ మొదట రోగి యొక్క బలహీనమైన చెయ్యిని పట్టుకొవలెను మరియు వ్యతిరెఖ వైపు ఉన్న మొకాలును మడవవలెను ➢ ఒక చేతితో రోగి బుజాన్ని మరియు యొక్క చేతితో రోగి యొక్కనడుము భాగాన్నీ గట్టిగా పట్టుకోండి ➢ మీ సూచనలకు అణుగుణంగా రోగిని మీకు దగ్గరగా జరగమని చేప్పండి ➢ రోగిని బలమైనకాలుని ఉపయోగించి బలహీనమైన కాలును మంచం అంచుకు తీసుకురమ్మని,అడగండి ➢ రోగి మంచం లో చాలా దూరంగా కూర్చొని ఉంటే, ముందుగా రోగి పాదాలు ఎత్తివేయకుండా నడుము భాగం నుంచి ముందుకు లాగండి ➢ రోగి తన బలమైన చేతిని చక్రం కుర్చీ చేతిపై ఉంచవచ్చు.	పద్దతిని పరిశీలిస్తున్నారు	రోగి సమ్రక్షకులు పరిశీలిస్తున్నరు

		➢ రోగి లేవడనికి మీ చ్చెతితో సైగా చేస్తూ 1, 2, 3 లేవండి అని చెప్పండి ➢ రోగిని బదిలీ చేయడానికి ముందుకు వంచుకోవాలి,రోగి మోకాళ్లయెదుట ఇరుసు,కుర్చీ మీదకు పిరుదులు ఉండాలి ➢ కుర్చీ లో బాగా కూర్చోవటానికి రోగికి సహాయం చేయండి ➢ చదునైన పలకలు భాగా ఉన్నాదా లేదా నిర్ధారించుకోండి ➢ రోగికి సౌకర్యంగా ఉన్నాదా లేదా అని అడగండి		
	వెనుక బాగం సమ్రక్షణ ప్రక్రియ వివరించడం	వెనుక భాగం సంరక్షణ: వెనుక భాగం సంరక్షణ అంటే వెనుక భాగంను శుభ్రపరిచి మర్దన చేయడం అని అర్థం **ప్రయోజనాలు:** ➢ పుండ్లు నివారించును ➢ రక్త ప్రసరణ మెరుగుపరస్తుంది మరియు అలసట నుంచి ఉపశమనం కలిగిస్తుంది **ప్రక్రియ యొక్క దశలు:** ➢ రోగికి మీరు చేసే దాని గురించి వివరించండి ➢ **మొదటిగా రోగి యొక్క వెనుక భాగం సం రక్షకునివైపు ఉండే విధంగా రోగిని ఒక వైపు త్రిపి ఉంచండి** ➢ **రోగికి గోప్యతను అందించండి** ➢ **వస్త్రాలు తొలగించి భుజాలు నుండి పిరుదుల వరకు బహిర్గతం చేయండి**	పద్దతిని పరిశీలిస్తున్నారు	రోగి సమ్రక్షకులు పరిశీలిస్తున్నరు

		➢ **శుభ్రంగా తడి గుడ్డ సహాయంతో భుజాలు నుండి పిరుదుల వరకు పూర్తిగా తుడవండి** ➢ **వృత్తాకార పద్ధతిలో సబ్బుతో రుద్దండి** ➢ **నీటితో వేసినసబ్బును శుభ్రం చేసి టవల్ తో పూర్తిగా పొడిగా చేయండి** ➢ **మీ చేతుల్లో ఔషదం తీసుకొని మొత్తం అరచేతుల ఉపరితలం చుట్టూ సున్నితంగా ఔషదాన్ని వేసుకోండి** ➢ **వేనుక భాగాంలో ఔషదాన్నివేసి ఇసుక జారే పద్ధతిలో సున్నితంగా పిరుదుల నుండి మొదలుపెట్టి భుజాల వరకు వృత్తాకారంలో ఔషదాన్ని పూయండి** ➢ మర్దన చేయడం **పిరుదులపై నుండి ప్రారంభించి లో భుజాలు వైపు ముగించండి** ➢ **వృత్తాకారంలో** మర్దన చేయడం **3 నిమిషాలు చేయండి** ➢ **నొక్కుచుండె పద్ధతి 3 నిమిషాలు చేయండి** ➢ **తట్టే పద్ధతి 3 నిమిషాలు చేయండి** ➢ 2-3 నిమిషాలపాటు కండరాలకు ఒత్తిడికలిగించే **పద్ధతి** కోనసాగించండి ➢ రోగికి కొంత సేపు విశ్రాంతి (లేదా) నిద్ర కోసం ఒక సౌకర్యవంతమైన స్థానం కల్పించండి		
	పక్షవాత రోగి యొక్క స్తానాలు ప్రదర్సించడం	స్థాన చలనము: ప్రతి రెండు గంటలకి ఒకసారి రోగి యొక్క స్థానం మార్చాలి **ప్రయోజనాలు**: -సౌకర్యాన్ని అందించడానికి -పుండ్లు నివారించును	పద్దతిని పరిశీలిస్తున్నారు	రోగి సమ్రక్షకులు పరిశీలిస్తున్నరు

		స్థానం యొక్క పద్ధతి	**విధానము**			
		వెనుకకు పడుకొని పెట్టడం	➢ మంచముమీద నిటారుగా పడుకొనిపెట్టడం ➢ మధ్య స్థానంలో తలను వుంచాలి ➢ తలను మధ్యలో ఉంచడం కోసం టవల్ ఉపయోగించండి ➢ దిండును బలహీనమైన భుజం మరియు చేతి కింద పెట్టాలి. ➢ బలహీనమైనకాలు బయటకు తిరిగి పోకుండా తటస్థంగా ఉందా,లేదా నిర్ధారించుకోండి,సరైన స్థానంలో కాలు ఉండడానికి దిండ్లు ఉపయోగించండి			
		పక్షవాత ప్రభావానికి గురికాని వైపు	➢ రోగి మీరున్న వైపు తిరిగి ఉండేలా చూడాలి ➢ తలను బాగా మంచి అమరికలోఉంచడానికి కింద ఒక దిండు ఉంచండి ➢ బలహీనమైన చేతి కింద ఒక దిండు ఉంచండి బలహీనమైన మోకాలను వొంచి దానికి కింద ఒక			

		పడుకొని పెట్టడం	దిండును ఉంచండి			
		బలహీనమైన వైపు పడుకొని పెట్టడం	➢ బలహీనమైన చేయిని శరీరానికి దూరంగా రోగిని తిప్పకమునుపు ఉందా,లేదా చూచుకొనుము ➢ రోగిని బలహీన వైపు తిప్పిమిగిలిన శరీరమంతా వెనుకకు పడిపోకుండా ఒక దిండును వెనుక పెట్టండి ➢ బలహీనమైన భుజాన్ని ముందుకు లాగండి రోగి కాళ్ళ మధ్య ఒక దిండు ఉంచండి			
		కుర్చీలో కూర్చుని పెట్టడం	➢ రోగి ముందుకు వంగిపోకుండా చూచుకొనుము ➢ వారు కుర్చీ లో బాగా వెనుకకు కూర్చొని ఉండాలి ➢ ఒక వైపుకు వంగిపోవడాన్ని నివారించండి ➢ బలహీన చేతి కింద ఒక దిండు ఉంచండి ➢ వారి అడుగు నేల మీద తిరిగి పోకుండా సరిగా నేరుగా ఉండేలా చూచుకొనుము ➢ బలహీనమైన వైపు తువ్వాలు (లేదా) మెత్తని దిండును ఉంచండి			

	అనాబిరుద్ధి పెంపొందించడానికి	**జ్ఞాన అభివృద్ధి:** **మెదడుకు శిక్షణా వ్యాయామాలు,అయైనా పద సమస్యలు, జ్ఞాపకశక్తి సమస్యలు, గణితము, మరియు చిక్కు ప్రశ్నలు వంటివి మెదడుకు మంచి సాధకములుగా ఉంటుంది. ఇలా క్రమముగా మెదడుకు ఉత్తేజము కలిగించుట ద్వారా, వ్యక్తి యొక్క మేధోశక్తి మెరుగుపడుతుంది**	పవర్ పాయింట్ ప్రెజెంటేషన్ తో కూడిన ఉపన్యాసం మరియు చర్చ	రోగి సమ్రక్షకులు వింటున్నారు
	సారాంశం	**సారాంశం:** పక్షవాత పునరావాసం ఒక ఉద్దేశం మరియు లక్ష్యంతో ఏర్పాటైన సంఘటిత ప్రణాళిక. దీని వలన తక్కువ కాలంలో కోల్పోయిన శక్తిని తిరిగినేర్చుకోవడంలో ఉపయోగపడుతుంది. సంరక్షకులు రోగుల అవసరాలను ఆధారంగా, తగిన పునరావాస పద్ధతులు ఎంచుకోవచ్చు. ఇది రోగి యొక్క ఆత్మవిశ్వాసం, మరియు తన పనులను తాను స్వతంత్రంగా చేసుకోనే సామర్థ్యం పెంచుతుంది, దాని కారణంగా రోగి స్వతంత్రంగా మరియు సంతోషంగా, సురక్షితంగా నివసించవచ్చు.		

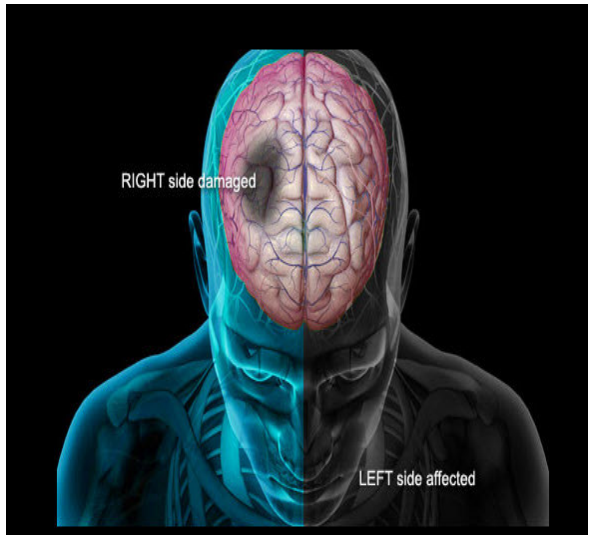
"Start Thinking
Wellness,
Not Illness"

THANK YOU!

OMAYAL ACHI COLLEGE OF NURSING

PUZHAL, CHENNAI – 600 066

POST STROKE REHABILITATION EDUCATIONAL PROGRAMME BOOKLET



BY

D.VIMALA KUMARI

M.Sc. (N) II YEAR

MEDICAL-SURGICAL NURSING

OBJECTIVES:

1. Stroke
   - 1.1. Meaning
   - 1.2. Risk factors
   - 1.3. Causes
   - 1.4. Warning signs
   - 1.5. Clinical manifestations
   - 1.6. Management
   - 1.7. Complications
2. Stroke rehabilitation
   - 2.1. Meaning
   - 2.2. Aim
   - 2.3. Duration
   - 2.4. Components
     - 2.4.1. Range of motion exercises and ambulation with assistive devices
     - 2.4.2. Communication skill
     - 2.4.3. Diet therapy including feeding technique (nasogastric tube, oral, self feeding)
     - 2.4.4. Lifting & transferring from bed to wheel chair
     - 2.4.5. Hygiene (back care, toileting, grooming, dressing) and positioning

References:

- Joanne V Hicky (2009),**the clinical practice of neurological and neuro surgical nursing,** Philadelphia, Lippincott Williams & wilkins publication.
- Lewis. L. Sharon, Shannon Ruff Dirsken, Margret McLean Heitkemper.(2007**). Medical surgical Nursing-Assessment and Management of clinical problems.** New Delhi. Elsevier publication.
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- Folder SL(2009) effect of a supportive-education nursing intervention on plder adults perceptions of self care after a stroke. rehabilitation nursing 162-167

Type of position	Procedure	Rationale	Position
	➢ Avoid leaning to one side ➢ Place a pillow under weaker arm ➢ Ensure that their foot is flat on the floor ➢ Place towel (or) cushion to the weak side	To keep it in position	

Cognitive development:

Brain training exercises such as word problems, memory problems, mathematics, puzzles may exercise the brain. through regular stimulation of brain helps to improve cognitive skills of individual

Conclusion:

Stroke rehabilitation is a targeted and organized plan to re-learn functions lost in the shortest period of time possible**.** Caregivers can based on the needs of the stroke patients, select the appropriate rehabilitation techniques. It, enable the stroke patient to live safely, independently and happily, thus improving self-confidence, self-image and self-care abilities.

STROKE REHABILITATION

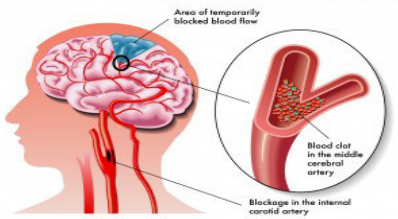
Introduction:

Globally, 20 million people suffers from stroke each year. High blood pressure contributes to more than 12.7 million strokes, 5 million will die as a consequence of stroke and 10 million will survive and of these who survive, five million will be disabled by stroke. Stroke rehabilitation program helps the patient to relearn skills lost .Participating in stroke rehabilitation helps the patient to regain independence and improve their quality of life. Care givers place an important role in providing living arrangements and re train the general living skills of patient with stroke.

1. STROKE:

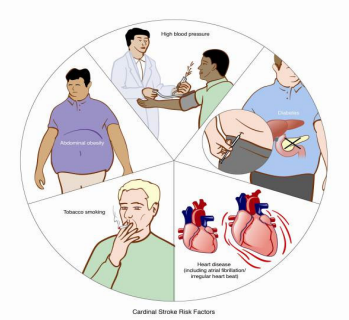
1.1Meaning of stroke:

Stroke is a loss of brain function (brain attack) that occurs when there is a sudden loss of blood supply to brain.



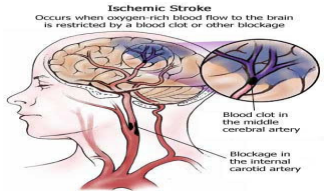
1.2 Risk factors:

- ❖ Obesity (lack of physical activity)
- ❖ Smoking
- ❖ Excessive alcohol consumption
- ❖ Uncontrolled Hypertension
- ❖ Diabetes mellitus
- ❖ Heart diseases like atrial fibrillation, myocardial infarction, cardiomyopathy, cardiac valve abnormality, cardiac congenital defect

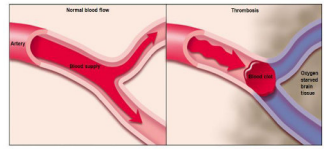


1.3 Causes:

- ➢ **Ischemia**- Decreased blood supply to the brain tissue due to obstruction of blood vessel by blood clot



- ➢ **Thrombosis-** It is narrowing of artery by fat deposition, causes a clot to form and blocks the passage of blood



Type of position	Procedure	Rationale	Position
	➢ Ensure that the head is well supported & in good alignment ➢ Place a pillow under the weak arm ➢ Bend the affected knee &Place the pillow under leg	to support the patient's affected arm & leg	
Lying on the weak side	➢ Ensure that the weak arm is placed away from the body before turning the patient ➢ Roll patient on weaker side allowing the body to rest back on to the pillow ➢ Slide weak shoulder forward ➢ Place a pillow between the patient's legs	To avoid excessive pressure over it	
Sitting position in a chair	➢ Ensure that the patient is not slouched ➢ They should be seated well back in to the chair	To support it	

Positioning:

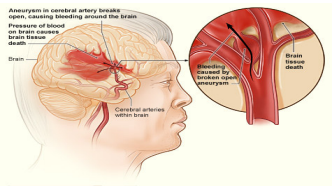
Every 2nd hourly has to change the position of the patient

Benefits

- To provide comfort
- To prevent bed sore

Type of position	Procedure	Rationale	Position
Lying on the back	➢ Lying flat on the bed ➢ Head in mid line position ➢ Use towel to position the head centrally ➢ Pillow can be place under weaker shoulder and arm ➢ Ensure that the weaker leg is placed in a neutral position and not rotated out, use pillows to hold the leg in position	A pillow helps to keep the elbow straight and if possible, the palms of the hand facing upwards. Relax the leg and prevent it turning out at the hip.	
Lying on the unaffected side	➢ Ensure that the patient is well rolled over on to your side		

- **Haemorrhage**- A burst in blood vessel suddenly occurs may allow the blood to seep in to and damage brain tissue



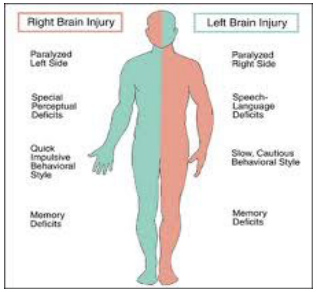
1.4 Warning signs of stroke:

- Sudden severe headache with unknown cause
- Sudden weakness (or) numbness of the face, arm (or) leg on one side of body
- Loss of speech (or) trouble talking
- Sudden dimness (or) loss of vision, particularly in one eye
- Unexplained dizziness, unsteadiness (or) sudden fall

1.5 Clinical manifestations:

- Right side brain damage-Patient may have weakness in left side
- Left side brain damage-Patient may have weakness in right side
- Weakness in one side of limbs/ both upper (or) lower limbs/ all four limbs
- Difficulty in speaking and writing

- Impairment of memory and judgement
- Difficulty in swallowing
- Unilateral hearing loss
- Alteration in muscle tone
- Alteration in reflex



- Urinary retention (or) incontinence
- Impaired skin sensation

1.6 MANAGEMENT:

- Immediate hospitalization
- Based on cause medical (or) surgical treatment
- Physiotherapy care
- Rehabilitation measures

Undressing techniques:

Techniques are always reversed for undressing.

Role of care giver:

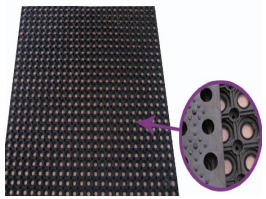
- Dressing and undressing should be done in a warm, comfortable environment. This helps you focus on the task.
- Sit on a chair when you are attempting to get dressed and undressed
- You may need the help of another individual when getting dressed
- Avoid tight fitting clothes
- Reduce the number of clothes worn
- Choose clothes made from cotton and natural fibers. This is especially important for someone who spends much of his/her time sitting. These fabrics are also easier to launder.

Grooming:

Individuals who have had a stroke may find it difficult to perform daily grooming tasks such as brushing their hair, cutting their nails or brushing their teeth, can use long handled combs and brushes for easy handling.

Bathing / Toilet devices:

Useful for to prevent injury and can do self care activities with the help of grab bars, bath chair/bench, anti-slip rubber mats, long handled tap turners, long handled brushes,




Dressing:

Patients who had a stroke, getting dressed and undressed is difficulty. Assistive devices can help them to do it by themselves and to help the care provider.

<u>Dressing techniques:</u>

Dress the weaker side first and undress it last.

1.7 Complications of stroke:

Early complications (with in 7 days)	Late complications(>7 days later)
➢ Cerebral edema (within 96 hr) ➢ Expansion of the infarct/ recurrent infarction ➢ Hemorrhagic transformation of the infarcted area ➢ Seizure ➢ Aspiration pneumonitis ➢ Gastrointestinal ulcers and/or bleeding ➢ Myocardial infarction ➢ Deep vein thrombosis and pulmonary embolism 	➢ Recurrent stroke ➢ Seizure ➢ Aspiration pneumonitis ➢ Deep vein thrombosis and pulmonary embolism ➢ Persistent cognitive or language dysfunction ➢ Contractures  ➢ Depression  ➢ Persistent loss of mobility ➢ Decubitus ulcer 

2. Stroke Rehabilitation – Role of Care givers

2.1 Meaning- Stroke rehabilitation provides a targeted and organized plan to re-learn functions lost in the shortest period of time possible.

2.2 Aim- Rehabilitation helps to restoration of patient physical, cognitive & sensory capabilities

2.3 Duration of stroke rehabilitation:

Rehabilitation should begin as soon as a stroke patient is stable, sometimes within 24 to 48 hours after a stroke. However, it is very dependent on the unique circumstances of the individual patient. Patients stay in the inpatient rehabilitation facility, usually for 2 to 3 weeks and engage in a coordinated, intensive program of rehabilitation, which involve at least 3 hours of active therapy a day, 5 or 6 days a week.

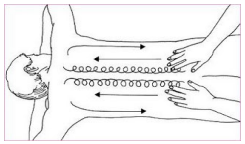
2.4. COMPONENTS:

Stoke rehabilitation include_

2.4.1Range of motion exercises and ambulation with assistive devices

- First place patient in lateral position with the back towards the care giver
- Provide privacy to the patient
- Remove the cloths and expose the back from shoulders to buttocks

- Wash back thoroughly from shoulders to buttocks with the help of clean wet cloth
- Apply soap in circular manner
- Clean the soap with water and dry thoroughly with towel



- Take lotion in your hands and smooth the lotion around the entire surface of the palms
- Apply lotion on the back ,beginning from buttock sand smoothening in circular movement towards the shoulders

- Begin the massage from buttocks towards the shoulders in _
- Circular movements for 3 min
- Kneading strokes for 3 min
- Tapping friction for 3 min
- Friction for 2-3 min
- Assist the client in a comfortable position for a period of rest (or) sleep

- Stabilize the patient hip and ask the patient push up to sitting
- If the patient is sitting too far in the bed, shuffle the patient bottom forward
- Patient can place their strong hand on the arm rest of the wheel chair (or) chair
- Cue the patient timing by saying 1, 2, 3 up
- To transfer lean the patient forward, pivot at the patient knees, bring the buttocks over to the chair
- Assist the patient to sit well back in to the chair
- Make sure that the flat plates are secure
- Ask the patient whether feel comfortable or not

2.4.5 HYGIENE (back care, toileting, bathing, grooming, and positioning):

Back care:

Meaning

Back care means cleaning and massaging the back

Benefits

- To prevent bed sore
- Improve circulation & relieve fatigue

Steps of procedure:

- Explain procedure to the patient

2.4.2 Improving communication skill through communication booklet

2.4.3Diet therapy and feeding techniques (nasogastric tube, oral, self feeding)

2.4.4 Lifting & transferring from bed to wheel chair

2.4.5 Positioning and hygiene (back care, hair care, bathing, dressing)

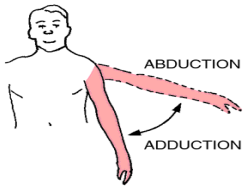
2.4.1. Range of motion exercises and ambulation with assistive devices:

Meaning:

ROM exercises is to maintaining normal range of motion of all joints

Purposes:

- To facilitate early mobilization
- To reduce the stiffening of joints
- To prevent further formation of clot in the blood vessels

Exercise	Picture	Description
Flexion		Bending, usually far ward but occasionally backward eg: neck, wrist joint, elbow joint, knee joint, hip joint, ankle joint
Extension		Straitening (or) bending backward eg: neck, wrist joint, elbow joint, knee joint
Abduction Adduction		Movement away from the mid line of the body eg: wrist joint, elbow joint Movement towards the midline of the body eg: wrist

2.4.4. Lifting and transferring from bed to wheel chair:

Purposes:

- To reduce risk of injury in lifting and transferring
- To the early mobilization

Role of care giver:

- Explain procedure to the patient
- Position the chair (or) wheel chair in line with the bed. Place the chair parallel to bed and faces either head (or) foot of bed

- First ask the patient to hold on to weaker arm and next bend the opposite knee
- Hold the patient with one hand on the pelvis and the other hand on the patient shoulder blade
- Ask the patient to roll towards you, with you guiding as necessary
- Ask the patient to use their stronger leg, to bring the weaker leg over the edge of the bed

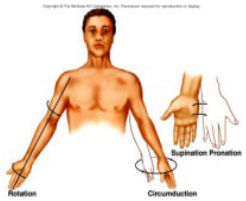
- After the meal is completed, assist in raising and cleaning the mouth
- Offer water after feed
- Provide comfortable position
- Encourage the people to eat, rather forcing
- Provide oral care to the patient

Oral self feeding (By patient):

To overcome the difficulty of feeding /eating with weaker arm can use plate guards, T-shaped (or)double handled cup, universal cuff tighter around hand, long handled spoons, rocker knife for to cut the food





Exercise	Picture	Description
		joint, elbow joint
Circumduction		Movement of a limb (or) digit so that it describes the shape of cone eg: shoulder joint
Rotation		Movement round the long axis of a bone eg: shoulder joint, neck
Pronation		Turning the palm of the hand down eg: wrist joint
Supination		Turning the palm of the hand up eg: wrist joint

Exercise	Picture	Description
Inversion		Turning the sole of the foot inwards eg: ankle joint
Eversion		Turning the sole of the foot out words eg: ankle joint

Ambulation with Assistive devices:

Assistive device is a specially designed device to assist people who have difficulty to perform activities of daily living

Purposes:

- To help with daily activities
- To maintain functional independence
- To maintain safety and stability
- To enhance the muscle action
- To improve self confidence and self image

- Provide comfortable position
- Frequent mouth wash is necessary
- Improper nasogastric tube feeding leads to aspiration.

Oral feeding techniques: (By caregiver)

- Ensure that the patient is awake (or) alert status enough to eat & drink
- Provide sitting position with back rest (or) pillows to support the back
- Place the towel on patient chest
- As much as possible honour the patient to include food cravings, likes & dislikes
- It is often easier for the patient to swallow semi solids
- Remind patient to chew on un effected side and inspect mouth for food collecting between cheek & gums

- Allow time for effective swallowing
- Avoid fluids /foods that are very cold (or) very hot
- If chocking does occur, support coughing and clearing efforts

Naso gastric tube feeding:

- Explain the procedure to the patient
- Arrange the articles at bed side
- Position the patient in semi sitting position
- Checking tube placement-
- Attach syringe to end of NG tube aspirate back on syringe gently to obtain gastric contents
- Keep the tip of the tube in a bowl of water & watch for any bubbles. If in lungs there will be air bubbles
- Check the temperature of feeding content
- Remove plunger from a 60ml syringe pinch the NG tube and connect syringe to feeding tube
- Height of feeding tube maintain 45cms from head of the patient
- Flush nasogastric tube with15-30ml of water before & after the feeding
- Avoid air entering in to the tube
- Various volumes of water have been suggested for drug dilution, which includes 10-30ml & up to 60-90ml
- Remove the syringe & recap tube after feed

Mobility devices:

Mobility aids are useful for stroke patient to assist with safety, stability and muscle action when moving (e.g. walking). This equipment can assist the individual achieve greater independence. There are various mobility aids that are available including-Walking canes, walking sticks, Roller walkers, wheelchairs, Quad walkers

Role of care giver:

Caregivers can base on the needs of the stroke patients, select the appropriate assistive devices

2.4.2 Communication skill:

Effective way to communicate with the stroke patient is-

Usage of communication booklet-

Purposes:

- To improve communication
- To identify needs of patient

This is the best way to improve communication .which is approximately 6”x5.5”in size and pre made one. It contains pictures, users simply point to the picture by using a finger or stylus to indicate their choice.

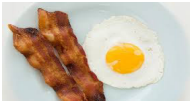
Topics covered are: yes/no, about me, WH questions, alphabet spelling boards, comments, basic needs, feelings, activities, personal care, hot and cold drinks, grocery shopping, fast foods, health & beauty aids, visitors, places, meal choices and more! Extra blank pages are provided to include your own vocabulary.

Role of care giver:

- Maintain eye to eye contact while providing care for to enhance self esteem
- Use verbal and non verbal cues to communicating the information
- Responds to the patient needs immediately
- Explain the procedure to the patient to gain cooperation
- Avoid disgusted facial expressions while providing care to the patient, to improve psychological well being
- Provide tender loving care

2.4.3 Diet therapy including feeding techniques (nasogastric tube, oral, self feeding):

Healthy food habits can help you reduce three risk factors for stroke — high cholesterol levels, high blood pressure and excess weight.

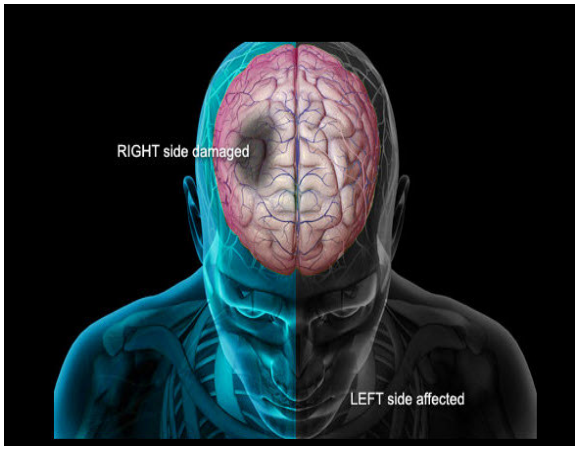
Foods to be taken	Foods to be avoid
➢ Less salt intake (Recommendation is 2g/day) ➢ Pulses ➢ unsaturated fatty oils (PUFA oils, rice brown oil) ➢ Fruits & vegetables -Choose 5 or more servings each day it reduces risk of stroke  ➢ Fish-2 servings /week ➢ Milk-calcium rich diet ➢ Green and yellow vegetables –antioxidants protects from stroke	➢ Red meat (mutton & beef))  ➢ Dairy products (ghee & butter)  ➢ Yellow part of egg ➢ Saturated fatty oils (palm oil, vanaspathi, dalda) ➢ <u>Others:</u> ❖ Alcohol ❖ Tobacco-nicotine products (cigerrate, beedi, gutka, snuff, tobacco leaves) 

“ஆரோக்கியத்தை யோசனை செய் நோயை அல்ல”

நன்றி

உமையாள் ஆச்சி செவிலியர் கல்லூரி
புழல், சென்னை – 600 066

பக்கவாத புனர்வாழ்வுக்கான நரம்பியல் கல்வித்திட்டத்திற்கான கையேடு



D.விமலா குமாரி
எம்.எஸ்.சி (செவி)
அறுவை சிகிச்சை மருத்துவ பிரிவு

குறிக்கோள்கள்:

1. பக்கவாதம்
   - 1.1. பொருள்
   - 1.2. ஆபத்திற்கான காரணிகள்
   - 1.3. காரணங்கள்
   - 1.4. எச்சரிக்கை அறிகுறிகள்
   - 1.5. மருத்துவ வெளிபாடுகள்
   - 1.6. மேலாண்மை
   - 1.7. சிக்கல்கள்
2. பக்கவாதத்திற்கான புனர்வாழ்வு
   - 2.1. பொருள்
   - 2.2. குறிக்கோள்
   - 2.3. நீடிக்கும் காலம்
   - 2.4. கூறுகள்
     - 2.4.1. இயக்க பயிற்சிகள் மற்றும் துணை சாதனங்கள் கொண்டு நடத்தல்
     - 2.4.2. தொடர்புத்திறன்
     - 2.4.3. உணவிற்கான சிகிச்சை உட்கொள்ளும் முறை உட்பட (நாசோ காஸ்ட்ரிக், வாய் வழி, சுயமாக உண்ணுதல்)
     - 2.4.4. சக்கர நாற்காலிக்கு தூக்கி மற்றும் மாற்றுதல்
     - 2.4.5. சுகாதாரம் (புன்புறத்தை பராமரித்தல், மலம் கழித்தல், உடுத்தல், ஆடை மாற்றுதல் மற்றும் உடல் நிலை சரியாக இருத்தல்)

அறிவாற்றல் வளர்ச்சி:

மூளை பயிற்சியான வார்த்தை சிக்கல்கள், நினைவாற்றல் சிக்கல்கள், கணிதம், புதிர்கள் மூளையை அன்றாடம் தூண்டுவதன் மூலம் தனி நபரின் அறிவாற்றல் மேம்படவும் வளர்ச்சி அடையவும் உதவுகிறது.

முடிவுரை:

பக்கவாத சீரமைப்பின் இல்லானது சீராக அமைக்கப்பட்ட பாடத்திட்டதின் மூலம் இழந்த அன்றாட செயல்பாடுகளை குறுகிய காலத்தில் திரும்ப பெறுவதாகும். பக்காவாத நோயாளியின் தேவைக்கேற்ப பொறுபாளர்கள் சீரமைப்பு நுட்பத்தை தேர்வு செய்ய வேண்டும். இந்த சீரமைப்பு நுட்பமானது அவர்கள் பாதுகாப்பாகவும், சுதந்திரமாகவும், சந்தோஷமாகவும் வாழ வழி செய்தோடு அவர்களின் சுயநம்பிக்கை, சுய உருவம் மற்றும் சுயமாக பராமரிக்கும் முறைகளை மேம்படுத்துகிறது.

நிலையின் வகைகள்	செய்முறை	காரணங்கள்	நிலை
நாற்காலியில் உட்கார்ந்த நிலையில்	➢ நோயாளி சரியாமல் இருப்பதை உறுதி செய்ய வேண்டும். ➢ நாற்காலியில் நன்றாக உட்புறமாக அமர வைக்க வேண்டும். ➢ ஒரு பக்கமாக சாய்வதை தவிர்க்க வேண்டும். ➢ பலவீனமான கையின் கீழ் தலையனை வைக்க வேண்டும். ➢ தரையில் அவர்களின் கால் தட்டையாக இருப்பதை உறுதி படுத்த வேண்டும். ➢ துவாலை (அல்லது) மெத்தையை பலவீனமான பக்கத்தில் வைக்க வேண்டும்.	அதை ஆதரிக்க அதை சரியான நிலையில் வைக்க	

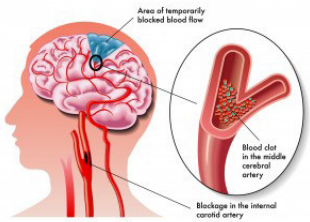
பக்கவாத புனர்வாழ்வு

முன்னுரை:

ஒவ்வொரு வருடமும் உலகம் முழுவதும் 15 மில்லியன் நபர்கள் பக்கவாதத்தினால் பாதிக்கப்படுகிறார்கள். ஏறத்தாழ 12.7 மில்லியன் நபர்கள் அதிக இரத்த அழுத்தத்தால் பாகவாதம் ஏற்பட்டு பாதிக்கப்படுகிறார்கள். பக்கவாதத்தால் 5 மில்லியன் நபர்கள் பாதிக்கப்பட்டு இறக்கிறார்கள், 10 மில்லியன் நபர்கள் பாதிக்கப்பட்டு உயிருடன் இருப்பார்கள். அதிலும் 5 மில்லியன் பாதிக்கப்பட்டவர்கள் ஊனமுற்றவர்களாக இருப்பர். பக்கவாதத்தில் இருந்து திரும்ப பழைய நிலைக்கு வருவதற்கான திட்டமானது ரு நோயாளி தன இழந்த திறமைகளை திரும்பவும் கற்றுக்கொள்ள உதவுகிறது. மேற்கூறிய திட்டத்தில் பங்கெடுத்துக்கொள்வதால், ஒரு நோயாளிக்கு தன்னுடைய சுதந்திரம் திரும்பப் பெறவும் தன் வாழ்க்கையின் தரத்தை உயர்த்தி கொள்ளவும் உதவுகிறது. பக்கவாத நோயாளிகளை கவனித்துக்கொள்பவர்கள் நோயாளிகள் வாழ்வதற்கான ஏற்பாடுகளை செய்துத்தருவதில் முக்கிய பங்கு வகிக்கிப்பதோடு பக்கவாத நோயாளிகள் வாழும் திறமைகளில் பயிற்சி எடுக்க உதவுகிறார்கள்.

1. பக்கவாதம்:

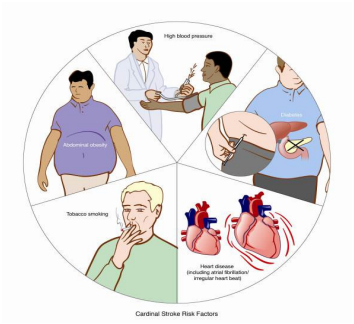
1.1 பக்கவாதத்தின் பொருள்:



மூளைக்கு செலும் இரத்த திடீரென்று குறைவதால், மூளை தன் செயல்பாடுகளை இழப்பதே பக்கவாதம் ஆகும்..

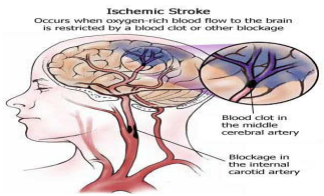
1.2 காரணிகள்:

- உடல் எடை பெறுகுதல்
- புகைப்பிடித்தல்
- அதிக அளவில் மது அருந்துதல்
- கட்டுக்கடங்காத இரத்த அழுத்தம்
- நீரிழிவு நோய்
- இதய நோய்கள் (ஊற்றரை பாதிப்பு, மயோகார்டியல் இன்பார்சஷன்,கார்டியோமயோபதி, இதய வால்வு பிறழ்தல், இதயத்தில் பிறவி குறைபாடு)

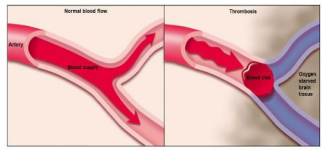


1.3 இதய நோய்கள்:

- **குருதி ஊட்டக்குறை-** இரத்தக் குழாய்களில் ஏற்படும் உறைப்பினால் மூளை தசைகளுக்கு இரத்தம் குறைதல்.



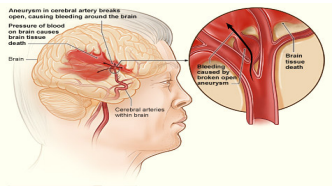
- **நாளங்களில் இரத்தம் உறைதல்-** இரத்தக் குழாய்களில் கொழுப்பு அடைத்துக் கொள்வதால், இரத்த ஓட்டத்தை தடைச்செய்கிறது.



நிலையின் வகைகள்	செய்முறை	காரனங்கள்	நிலை
	வேண்டும்.		
பாதிக்கப் பட்ட பக்கத்தில் படுத்தல்	➢ நோயாளியை திருப்புவதற்கு முன்னர் பாதிக்கப்பட்ட கை தூரமாக வைத்து அதனை உறுதி செய்ய வேண்டும். ➢ நோயாளியை பலவீனமான பக்கத்தில் உருள செய்து அவர்களின் பின்புறம் தலையணை மீது ஒட்டி இருத்தல் வேண்டும். ➢ பலமில்லாத தோளை முன் புறமாக சாய்க்க வேண்டும். ➢ இரு கால்களின் இடையில் தலையணை வைக்க வேண்டும்.	அதன்மேல் அதிகபடியான அழுத்தத்தை தவிர்ப்பதற்கு	

நிலையின் வகைகள்	செய்முறை	காரணங்கள்	நிலை
	தலையணை கொண்டு கால்களை பிடித்துக் கொள்ள வேண்டும்.		
பாதிக்கப் படாத பக்கத்தில் படுப்பது	➢ நோயாளி உங்கள் பக்கமாக உருளுவதை உறுதிப்படுத்தி கொள்ள வேண்டும். ➢ தலையானது ஆதரவான நிலையில் மற்றும் நல்ல சீரமைப்புடன் இருப்பதை உறுதி செய்யுங்கள். ➢ பலவீனமான கையின் அடியில் தலையணை வைக்க வேண்டு. ➢ பாதிக்கப்பட்ட முழங்காலை வளைத்து அதனடியில் தலையணை வைக்க	பாதிக்கப்பட்ட நோயாளியின் கை & கால் ஆதர்வு கொடுக்க	

➢ **குறுதிப்போக்கு-** இரத்த குழாய்கள் வெடிப்பதால் மூளை தசைகளுக்கு பாதிப்பு ஏற்படுகிறது.



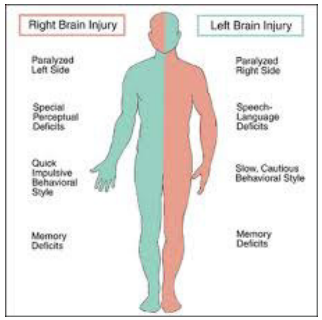
1.4 பக்கவாத்தின் அறிகுறிகள்:

- காரணமில்லாமல் திடீரென்று ஏற்படும் கடுமையான தலைவலி.
- உடலில் முகம், கை அல்லது கால் ஆகியவற்றில் ஒரு பக்கமே ஏற்படும் பலவீனம் அல்லது மரத்துப் போகும் தன்மை.
- பேசும் திறனை இழத்தல் அல்லது பேசுவதில் தடை.
- குறிப்பாக ஒரு கண்ணில் மட்டுமே ஏற்படும் பார்வை மங்கும் தன்மை அல்லது பார்வை இழப்பு.
- காரணம் கூறமுடியாத தலை சுற்றல், தடுமாற்றம் அல்லது திடீரென்று விழுதல்.

1.5 மருத்துவ வெளிபாடு:

- வலது புற மூளையில் சேதம் ஏற்பட்டால் - நோயாளிகளுக்கு இடது பக்கம் பலவீனம் ஏற்படும்.
- இடது புற மூளையில் சேதம் ஏற்பட்டால் - நோயாளிகளுக்கு வலது பக்கம் பலவீனம் ஏற்படும்.

- ஒரு பக்க கைகால்/கைகள் அல்லது கால்கள் ஏற்படும் பலவீனம்.
- பேசுவதில் தடை
- எழுதுவதில் தடை
- ஞாபகசக்தி மற்றும் முடிவெடுப்பதில் தடை
- முழுங்குவதில் தடை
- ஒரு பக்கமே ஏற்படும் காது கேளாமை
- தசைகளில் ஏற்படும் மாறுதல்
- அணிச்சை செயல்களில் மாறுதல்
- கட்டுப்படாமல் சிறுநீர் கழிதல்
- சருமத்தில் உணர்ச்சி குறைதல்



1.6 சமாளித்தம் வழிமுறை:

- உடனடியாக மருத்துவமனையில் அனுமதித்தல்
- மருத்துவம் மற்று அறுவை சிகிச்சை காரணங்களை அடிப்படையாக கொண்டே அமைகிறது.
- உடற்பயிற்சி மூலம் நோயை குணப்படுத்துதல்
- பக்கவாதத்திலிருந்து பழைய நிலைக்கு வருவதற்கான முறை

நன்மைகள்:

- ஆறுதல் வழங்க
- படுக்கைப்புண்ணை தவிர்க்க

நிலையின் வகைகள்	செய்முறை	காரணங்கள்	நிலை
பின்புறமாக் படுத்தல்	➢ தட்டையான நிலையில் படுக்க வேண்டும் ➢ தலையானது மைய பகுதியில் இருத்தல் வேண்டும். ➢ துவாலை கொண்டு தலையை நடுவில் நிலைப்படுத்த வேண்டும் ➢ பலவீனமான தோள்பட்டை மற்றும் கையின் கீழே தலையனை வைக்கலாம். ➢ பலவீனமான காலை நடு நிலையில் இருப்பதை உறுதிபடுத்தி கொள்ள வேண்டும். அவைகள் சுழலக் கூடாது.	தலையணை முழங்கையை நேராகவும் முடிந்தால் உள்ளங்கை மேல் புறமாக பார்க்கும் நிலையில் இருக்க உதவுகிறது. கால்களை சுகமாகவும் மற்றும் இடுப்பிலிருந்து திரும்பாமல் இருக்க உதவுகிறது.	

- மற்றொருவர் ஆடை அணிய முயலும் போது அவர்களுக்கு உதவியாக இருக்க வேண்டும்.
- இருக்கமான உடைகளை தவிர்க்க வேண்டும்.
- அடைகள் அதிகமாக அணிவதை குறைக்க வேண்டும்.
- பருத்தி மற்றும் இயற்கையான இழைகள் கொண்ட ஆடைகளை தேர்வு செய்ய வேண்டும். இது அதிக நேரமாக உட்காரும் நோயாளிகளுக்கு தேவைப் படுகிறது. இந்த அடைகள் எளிதாக துவைப்பதற்கு ஏதுவாகிறது.

சீர்ப்படுத்துதல்:

பக்கவாத ஏற்பட்ட நோயாளிகளுக்கு அன்றாடம் செய்யும் சீர்ப்படுத்தும் வேலைகளான தலை வாருதல், நகங்களை நறுக்குதல் (அல்லது) பல் துலக்குதல் ஆகியவை கடினமாக இருக்கும். நீளமான கைப்பிடிகளை கொண்ட சீப்புகள் மற்றும் பல் தூரிகைகளை பயன்படுத்த வேண்டும்.

நிலைப்படுத்துதல்:

2 மணி நேரத்திற்கு ஒரு முறை நோயாளியின் நிலையை மாற்ற வேண்டும்.

1.7 பக்கவாதத்தினால் ஏற்படும் சிக்கல்கள்:

ஏழு நாட்களுள் ஏற்படும் ஆரம்பகால சிக்கல்கள்	ஏழு நாட்களுக்கு பிறகு ஏற்படும் சிக்கல்கள்
➢ பெருமூளை வீக்கம் (96 மணி நேரத்திற்குள்) ➢ இறப்பை வீக்கம்/மீண்டும் மீண்டும் ஏற்படும் வீக்கம் ➢ இறப்பை வீக்கத்தால் சிதைவு ஏற்படுதல் ➢ சீசர் ➢ மூச்சு சம்பந்தமான நீமோனைட்டிஸ் ➢ குடலில் ஏற்படும் புண் அல்லது இரத்த போக்கு ➢ ஆழமான நரம்புகளில் இரத்த உறைவு மற்றும்  நுரையிலில் இரத்த குழாய் அடைப்பு ➢ மாரடைப்பு	➢ அடிக்கடி ஏற்படும் பக்கவாதம் ➢ சீசர் ➢ சுவாசத்தீல் நிமோனைட்டிஸ் ➢ ஆழமான நரம்புகளில் இரத்த உறைவு மற்றும் நுரையீரலில் இரத்த குழாய் அடைப்பு ➢ டெகுபைடிஸ் அல்சர் ➢ நிலையான புலணுர்வு அல்லது மொழி பிறழ்ச்சி ➢ சுருக்கங்கள்  ➢ மன அழுத்தம் ➢ உடல் இயக்கதை தொடர்ந்து இழத்தல்  

2. பக்க வாதத்திலிருந்து பழைய நிலைக்கு திரும்புதல் - பொருப்பாளரின் பங்கு

2.1 பொருள்-இயன்ற நேரத்தில் குறைந்த காலகட்டத்தில் இழந்த செயல்பாடுகளை மீண்டும் கற்றுக்கொள்ள நல்ல பாடதிட்ட முறையில் பக்கவாதத்திலிருந்து பழைய நிலைக்கு வரும் பயிற்சி உதவுகிறது.

2.2 குறிக்கோள்-ஒரு நோயாளியின் உடல் நிலை, அறியும் திறன், உணர்ச்சி ஆகியவற்றை திரும்பவும் பெற பக்கவாததிலிருந்து பழைய நிலைக்கு வருவதற்கு உண்டான பயிற்சிகள் உதவுகின்றன.

2.3 பக்கவாததிலிருந்து பழைய நிலைக்கு வருவதற்கு உண்டான பயிற்சிகளின் கால அளவு:

பக்கவாதத்தினால் பாதிக்கப்பட்ட நோயாளி ஸ்திரமான நிலையில் இருக்கும் பொழுதே பயிற்சி ஆரம்பித்துவிட வேண்டும். பக்கவாதம் ஏற்பட்டு 24 மணி முதல் 48 மணி நேரத்திற்குள் துவங்க வேண்டும். ஒரு நோயாளியின் தனிப்பட்ட சூழ்நிலைகளை சார்ந்தே அமைந்துள்ளது இந்த பயிற்சிகள். பயிற்சிக்கான வசதிகள் பொருந்திய மருத்துவ மனையில் பொதுவாக 2 முதல் 3 வாரங்கள் நோயாளிகள் தங்கி, சமமாக நிகழ்த்தப்படும் தீவிரமான பயிற்சிகளில்

ஆடை உடுத்துவது:

பக்கவாதத்தால் பாதிக்கப்பட்ட நோயாளிகள் ஆடை உடுத்துவதற்கும் கலைவதற்கும் மிகவும் கடினமாக இருக்கும். உபகரணங்கள் அவைகளை தாங்களே செய்துக்கொள்ள உதவுவதோடு அல்லாது பொறுப்பாளருக்கும் உதவுயாக உள்ளது.

<u>ஆடை அணியும் நுட்பங்கள்:</u>

ஆடையை பலவீனமான பகுதியை முதலில் உடுத்தியும் கலைவதற்கு பலவீனமான பகுதியை கடையாகவும் பயன்படுத்த வேண்டும்.

<u>ஆடையை கலையும் நுட்பங்கள்:</u>

இந்நுட்பங்கள் ஆடை அணிவதற்கு நேர்மாறாக எப்போதும் இருத்தல் வேண்டும்.

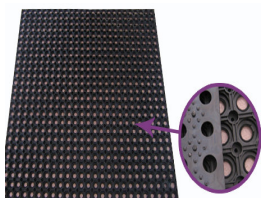
பொறுப்பாளரின் பங்கு:

- ஆடை அணிவதற்கு கலைவதற்கு சூடான மற்றும் வசதியான சூழலில் செய்ய வேண்டும். அது அவர்களின் கவனமாக செயல்படுவதற்கு உதவியாக இருக்கும்.
- ஆடை அணிவதற்கு கலைவதற்கு முயலும் போது நாற்காலியில் அமர வேண்டும்.

- பிட்டத்திலிருந்து தோள்பட்டை வரை மசாஜ் செய்ய வேண்டும்.
- 3 நிமிடங்கள் வட்ட இயக்கமாக செய்ய வேண்டும்.
- பதமாக 3 நிமிடங்கள் மசாஜ் செய்ய வேண்டும்.
- 3 நிமிடங்கள் மெதுவாக தட்ட வேண்டும்.
- 2–3 நிமிடங்கள் உராய்வை ஏற்படுத்த வேண்டும்.
- பாதுகாப்பாளர்கள் வசதியான நிலையில் நோயாளியை ஓய்வெடுக்கவோ (அல்லது) தூங்கவோ உதவி செய்ய வேண்டும்.

குளித்தல்/மலம் கழிக்கும் சாதனங்கள்:

கைப்பிடிப்பான்கள், குளியல் நாற்காலி / பெஞ்ச், வழுக்காத ரப்பர் கால் விரிப்புகள், நீண்ட பிடிப்பான் கொண்ட குழாய்கள், நீளமான கைப்பிடி கொண்ட பல் தூரிகைகள் உபயோகப்படுத்துவதன் மூலம் காயங்கள் மற்றும் சுயமாக தன்னை பராமரித்துக் கொள்ள உதவுகிறது.




நோயாளிகள் ஈடுபடுத்தப் படுகிறார்கள். ஒரு நாளைக்கு 3 மணி நேரம், வாரத்திற்கு 5 முதல் 6 நாட்கள் இந்த பயிற்சி அளிக்கப்படுகிறது.

2.4. அங்கங்கள்:

பக்கவாதத்திற்கான பயிற்சிகள்:

2.4.1 தொடர்ந்து அளிக்கப்படும் அசையும் உடற்பயிற்சிகள் மற்றும் உதவிகரமான உபகரணங்களோடு இடம் விட்டு இடம் பெயரும் பயிற்சி

2.4.2 தொடர்பு கொள்ளும் திறன்

2.4.3 உணவு முறை மற்றும் உட்கொள்ளும் முறை (மூக்கு வழியாக, வாய், மற்றும் தானே உண்ணும் முறை)

2.4.4 படுக்கையிலிருந்து சக்கர நாற்காலியில் தூக்கி வைப்பதும் மற்றும் மாற்றுவதும்

2.4.5 நிலை மற்றும் சுகாதாரம் (பின்புற பராமரிப்பு, தலை முடி பராமரிப்பு, குளித்தல் மற்றும் உடை அணிதல்).

2.4.1. அசைவு பயிற்சிகள் மற்றும் உபகரணங்களோடு இடம் விட்டு இடம் பெயரும் பயிற்சிகள்

பொருள்:

அனைத்து மூட்டுகளிலும் சாதாரண நிலையை பராமரிக்க அசைவு பயிற்சிகள் உதவுகின்றன.

நோக்கங்கள்:

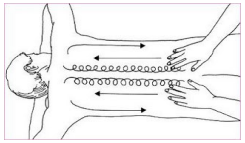
- வெகு விறைவில் உடல் அசைவை ஏற்படுத்துதல்
- மூட்டுகளில் ஏற்பட்டிருக்கும் இறுக்கத்தை குறைப்பது
- இரத்த நாளங்களில் இரத்த உறைவு ஏற்படாமல் தடுக்க.

உடற்பயிற்சி	படம்	விளக்கம்
வளைத்தல்	 Eccentric wrist flexion	பொதுவாக முன்புறம் வளைத்தல், ஆனால் ஏதாவது ஒரு சமயம் பின்புறம் வளைத்தல் உ.த.: கழுத்து, மணிகட்டு, மூட்டு, கை மூட்டு, முட்டி மூட்டு
நீட்டுதல்		நீட்டுதல் அல்லது பின்புறம் வளைத்தல். உ.த. கழுத்து மணிகட்டு, மூட்டு, கை மூட்டு, முட்டி மூட்டு
தலையை பக்கமாக அப்பால் இழுத்து இயக்குதல்		உடலில் நடு பகுதியில் இருந்து அப்பால் நகர்த்தல் உ.த: மணிகட்டு மூட்டு, கைமூட்டு உடலில் நடு பகுதியை

நடைமுறை:

- செயல்முறையை நோயாளிக்கு விளக்க வேண்டும்.
- முதலில் நோயாளியை பக்கவாட்டு நிலையில் பின்பகுதி பொறுப்பாளரை நோக்கி இருக்க செய்ய வேண்டும்.
- நோயாளிக்கு தனியுரிமை வழங்க வேண்டும்.
- ஆடைகளை அகற்றி அவர்களின் பின்புறத்தை தோள்பட்டையிலிருந்து பிட்டம் வரை வெளிப்படுத்த வேண்டும்.

- ஈரமான துணியை கொண்டு அவர்கள் பின்புறத்தை தோள்பட்டையிலிருந்து பிட்டம் வரை சுத்தல் செய்ய வேண்டும்.



- சுழற்சி முறையில் பின்புறத்தை சோப்பிட வேண்டும்.
- நீரினால் சோப்பை சுத்தமாக கழுவி துவாலை கொண்டு உலர்த்த வேண்டும்.

- லோஷனை கையில் எடுத்துக் கொண்டு அவற்றை உள்ளங்கை முழுவதும் குழைத்து கொள்ள வேண்டும்.
- பின்புறத்தில் லோஷனை இட வேண்டும் முதலில் பிட்டத்தில் இருந்து ஆரம்பித்து மென்மையாக்கி தோள்பட்டை நோக்கி இட வேண்டும்.

- 1,2,3 என்று எண்ணிக்கையை கூறி நோயாளியின் மாறும் நேரத்தை ஏற்படுத்த வேண்டும்.
- நோயாளியை மாற்றுவதற்கு அவர்களை முன் புறமாக கால் முட்டியை மையமாக கொண்டு சாய்து அவர்களுடைய பிட்டத்தை நாற்காலியின் மேல் கொண்டு வர வேண்டும்.
- நோயாளியை நாற்காலியில் உட்புறமாக சரியாக உட்கார உதவி செய்ய வேண்டும்.
- தட்டையான பிளேட்டுகள் பாதுகாப்பாக இருப்பதை உறுதிபடுத்திக் கொள்ள வேண்டும்.
- நோயாளி சுகமாக இருக்கிறாரா அல்லது இல்லையா என்று கேட்க வேண்டும்.

2.4.5 சுகாதாரம் (பின்புற பராமரிப்பு, மலம் கழிதல், குளித்தல், சீர்படுத்துதல், மற்றும் பொருத்துவது):

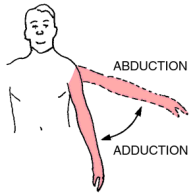
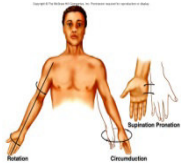
பின்புற பராமரிப்பு:

பொருள்

பின்புற பராமரிப்பு என்பது பின்புறத்தை சுத்தம் மற்றும் மசாஜ் செய்வதாகும்.

நன்மைகள்

- படுக்கைப்புண் ஏற்படாமல் தடுக்க.
- சுழற்சியை மேம்படுத்த & சோர்விலிருந்து விடுபட.

உடற்பயிற்சி	படம்	விளக்கம்
ஒன்று சேர்தல்		நோக்கி நகர்தல் உ.த. மணிகட்டு, மூட்டு, கை மூட்டு
சுழற்றல் சுழற்சி		கூம்பின் வடிவில் ஒரு கால் அல்லது அதன் ஐக்கிய பகுதியை இயக்குவது உ.த: தோள்பட்டை, மூட்டு எலும்பின் நீண்ட தண்டின் ஒரு அசைவு உ.த: தோள்பட்டைஒ மூட்டு, கழுத்து
உள்ளங்கை கீழ் இருக்க கை விரித்தல் உள்ளங்கை மேல் இருக்க கை விரித்தல்	 	உள்ளங்கை கீழ் நோக்கி திருப்புதல் உ.த.: மணி கட்டு மூட்டு உள்ளங்கை மேல் நோக்கி திருப்புத்தல் உ.த.: மணி கட்டு மூட்டு
நேர்மாறல் எவர்சன்		துதிக்காலை உட்புறமாக திருப்புதல் உ.த: கணுக் கால் மூட்டு துதிக்காலை வெளிபுறமாக திருப்புதல் உ.த: கணுக் கால் மூட்டு

உபகரணங்கள் உதவியுடன் இடம் விட்டு இடம் பெயர்தல்:

உபகரணங்கள் என்பது அன்றாடம் செய்ய வேண்டிய செயல்களை செய்ய அதற்காகவே வடிவமைக்கப் பட்டவையாகும்

நோக்கங்கள்:

- அன்றாடம் செய்ய வேண்டிய செயல்களுக்கு உதவி புரிதல்
- சுதந்திரமாக செயல்களை பராமரித்தல்
- பாதுகாப்பு மற்றும் திடத்தை பராமரித்தல்
- தசை அசைவுகளை அதிகரித்தல்
- தன்னம்பிக்கை மற்றும் சுய உருவத்தை முன்னேற்றுதல்

இயக்க சாதனங்கள்:

இச்சாதனங்கள் பக்கவாதத்தால் பாதிக்கப் பட்டவர்கள் நடமாடும் போது தசைகளை அசைக்கவும், திடமாக இருக்கவும்,

பாதுகாப்பிற்காகவும் உதவிகரமாக உள்ளது. இந்த உபகரணங்கள் அவர்களுக்கு பெறும் சுதந்திரத்தை தருகிறது. நடமாடுவதற்கு உதவியாக பல உபகரணங்கள் உள்ளன அவை கைப்பிரம்பு, கைத்தடி, உருளும் நடை உபகரணம், சக்கர நாற்காலி மற்று குவாட் நடை உபகரணங்கள்

படுக்கைக்கு இணையாகவும் மற்றும் தலை (அல்லது) படுக்கையின் கால் பகுதியை பார்பதுபோல் வைத்தல்.

- முதலில் நோயாளியை பலவீனமான கையை பிடித்து கொண்டு அதன்பின் அதற்கு எதிரான முழங்காலை வளைக்க சொல்ல வேண்டும்.
- நோயாளியின் இடுப்பை ஒரு கை கொண்டும் மறு கையால் நோயாளியின் தோள்பட்டையை பிடித்துக் கொள்ள வேண்டும்.
- நோயாளிக்கு அவசியமான வழியை காட்டி உங்களை நோக்கி உருள சொல்ல வேண்டும்.

- நோயாளியை அவர்களுடைய பலம் பொருந்திய காலை கொண்டு தங்களுடைய பலவீனமான காலை படுக்கையின் விளிம்பிற்கு கொண்டு வர சொல்ல வேண்டும்.
- நோயாளியின் இடுப்பை திடப்படுத்தி நாற்காலியில் தள்ளி உட்கார சொல்ல வேண்டும்.

- நோயாளி படுக்கையில் உட்புறமாக உட்கார்ந்து இருந்தால் அவர்களின் கீழ்ப்பகுதியை அசைத்து நகர்த்த வேண்டும்.
- நோயாளி தனது பலமான கையால் நாற்காலி (அல்லது) சக்கர நாற்காலியின் பிடியின் மேல் வைக்க வேண்டும்.

சுற்றி இறுக்கமாக கட்டிய கப், நீளமான கைப்பிடியை கொண்ட கரண்டி, ராக்கர் கத்தி முதலியவற்றை உணவை எடுக்கவும் வெட்டவும் பயன்படுத்த வேண்டும்.





2.4.4. படுக்கையிலிருந்து சக்கர நாற்காலிக்கு தூக்கி மாற்றுதல்:

நோக்கங்கள்:

- உயர்த்தும் போதும் மாற்றும் போதும் காயம் ஏற்படாமல் இருக்க.
- விறைவில் உடல் அசைவுகளை உண்டாக்க.

பொறுப்பாளரின் பங்கு:

- நோயாளிகளுக்கு செயல்முறைய விளக்க வேண்டும்.
- நாற்காலி (அல்லது) சக்கர நாற்காலியை படுக்கைக்கு ஏற்ப நிலலப்படுத்த வேண்டும். நாற்காலியை

பொறுப்பாளரின் பங்கு:

பொறுப்பாளர்கள் பக்கவாத நோயாளியின் தேவைகளை அறிந்து அதற்கு தகுந்த உபகரணங்களை தேர்வு செய்ய வேண்டும்.

2.4.2 தொடர்ப் கொள்ளும் திறமைகள்:

சரியான முறையில் பக்கவாத நோயாளியுடன் தொடர்பு கொள்ள வழியானது எதுவென்றால் -

தொடர்பு கொள்வது பற்றிய புத்தகங்களை பயன்படுத்தல்

நோக்கங்கள்:

- தொடர்பாற்றலை மேம்படுத்துவது
- நோயாளியின் தேவைகளை கண்டறிதல்

இது தான் தொடர்பு கொள்ளும் சரியான வழிமுறையாகும் அதாவது ஏறத்தாழ 6”x5.5” அளவுடன் முன்கூட்டியே செய்யப்பட்டதாகும். இதில் படங்கள் கானப்படும் உபயோகிப்பவர்கள் இப்படங்களை கைவிரல்களாலும் எழுத்தாணி மூலமும் படங்களை சுட்டிக்காட்டி தேர்வு செய்வார்கள்.

தலைப்புகள் என்னவென்றால்: ஆம்/இல்லை, என்னைப்பற்றி, கேள்விகள், எழுத்துக்களை கொண்ட பலகை, கருத்துகள், அடிப்படை தேவைகள், உணர்வுகள்,

செயல்கள், தனிப்பட்ட பாதிகாப்பு, சூடான மற்றும் குளிர்ந்த பானங்கள், பலசரக்கு வாங்குதல், துரித உணவுகள், உடல் நலம் மற்றும் அழகு சாதன பொருட்கள், விருந்தாளிகள், இடங்கள், உணவு தேர்வுகள் மற்றும் இன்னும்! கூடுதல் வெற்று பக்கங்கள் உங்களுடைய சொந்த சொல்கராதி கொண்டிருக்கும்.

பொறுப்பாளரின் பங்கு:

- சுயமரியாதை மேம்படுத்த உதவும் போது கண்ணுக்கு கண் தொடர்பு கொள்ள வேண்டும்.
- தகவல்களை பரிமாறும் போது வாய்மொழி சொற்கள் மற்றும் சொல்லிலா குறிப்புகள துணை கொள்ள வேண்டும்.
- நோயாளியின் தேவைகளை உடனடியாக பூர்த்தி செய்ய வேண்டும்.
- நோயாளியின் ஒத்துழைப்பை பெற செயல்முறைகளை விளக்க வேண்டும்.

- பாதிக்கப்படாத பக்கத்தை கொண்டு மெல்லுவதற்கு நோயாளிக்கு நினைவுப்படுத்த வேண்டும் மற்றும் கன்னங்கள் மற்றும் ஈறுகளில் உணவு துணுக்குகள் சேர்தலை ஆய்வு செய்தல் வேண்டும்.
- உணவை விழுங்குவதற்கு போதுமான நேரத்தை அனுமதிக்க வேண்டும்.
- குளிர்ச்சியான (அல்லது) சூடான நீராகாரங்கள்/ உணவினை தவிர்த்தல் வேண்டும்.
- சுவாசத்தடை ஏற்பட்டால், இருமுவதற்கும் தடை நீக்குவதற்கும் உதவி செய்ய வேண்டும்.
- உணவு உட்கொண்ட பிறகு வாய் உயர்த்தி சுத்தம் செய்ய உதவிட வேண்டும்.
- உணவு அளித்த பின் குடிக்க தண்ணீரை அளிக்க வேண்டும்.
- வசதியான நிலையை அளிக்க வேண்டும்.

- கட்டாயமாக உணவு உட்கொள்வதற்கு பதிலாக உணவு உண்ண தூண்ட வேண்டும்.
- வாயை பராமரிக்க உதவ வேண்டும்.

வாய்வழி சுயமாக உணவு உண்ணுதல் (நோயாளிகள்):

பலவீனமான கையை கொண்டு உணவு உட்கொள்ள முடியவில்லையென்றால் பாதுகாப்பான தட்டுகள், T-வடிவ (அல்லது) இரட்டை பிடிகளுடன் கூடிய கோப்பை, கையை

- மருந்தின் திடத்தை குறைக்க பல விதமான அளவு கொண்ட தண்ணிரை உபயோகப்படுத்த பரிந்துரைக்க படுகிறது அதில் 10-30மி.லி & 60-90மி.லி வரை.
- சிரிஞ்சை அகற்றி அந்த குழாயை மூட வேண்டும்.
- வசதியான நிலையை நோயாளிக்கு வழங்க வேண்டும்
- அடிக்கடி வாயை கழுவுதல் அவசியம்.
- முறையற்ற முறையில் மூச்சு குழாய் மூலமாக உணவு வழங்கினால் மூச்சிரைப்பு ஏறப்டுத்தும்.

வாய் வழியாக உணவு வழங்குதல்: (பொறுப்பாளரினால்)

- நோயாளி உணவு உட்கொள்ளவும் & குடிக்கவும் விழித்த/எச்சரிக்கையான நிலையில் இருக்கிறாரா என்று உறுதி செய்துக்கொள்ள வேண்டும்.
- உட்கார்ந்த நிலையில் முதுகுபுறம் சாய்ந்த நிலையில் (அல்லது) தலையணை கொண்டு தாங்கும் நிலையை நோயாளிக்கு அளிக்க வேண்டும்.
- நோயாளியின் மார்பு பகுதியை துவாலையை வைக்க வேண்டும்.
- நோயாளிக்கு பிடித்த & பிடிக்காத உணவு விருப்பங்களுக்கு மதிப்பளித்தல் அவசியம்.
- அடிக்கடி நோயாளிக்கு அரைதிடமான உணவு விழுங்குவது எளிதாக இருக்கும்.

- நோயாளியை பராமரிக்கும் போதும் உளவியல் நல் வாழ்வை மேம்படுத்த வெறுப்புற்றா முக பாவனைகளை தவிர்க்க வேண்டும்.
- அன்பான பாதுகாப்பை வழங்க வேண்டும்.

2.4.3 உணவு சிகிச்சை வழங்கும் போது அதில் அடங்க வேண்டிய உணவு நுட்பங்கள் (குடல் குழாய், வாய்வழி, சுயமாக உணவு உட்கொள்ளும் முறை)

ஆரோக்கியமான உணவு முறை மூன்று ஆபத்து காரணிகளை குறைக்க உதவுகிறது - அதிக கொழுப்பு சத்து அளவு, அதிக இரத்த அழுத்தம் மற்றும் அதிகபடியான உடல் எடை.

உட்கொள்ள வேண்டிய உணவு	தவிர்க்க வேண்டிய உணவு
➢ குறைந்த அளவு உப்பு சேர்த்தல் (2g/day) ➢ பருப்பு வகைகள் ➢ ஈரபதமான கொழுப்புள்ள எண்ணெய் (ப்யுபா எண்ணெய், அரிசு தவிடு எண்ணெய்) ➢ பழங்கள் & காய்கறிகள் -5 அல்லது அதற்கு மேல் உட்கொள்ளுவதால்	➢ சிவப்பு நிற  இறைச்சி (ஆட்டிறைச்சி மற்று மாட்டிறைச்சி) ➢ பால் பொருட்கள் (நெய் & வெண்ணெய்)

பக்கவாதத்திற்கான அபாயத்தை குறைக்கிறது.

- மீன் – வாரத்திற்கு 2 முறை
- பால் - கால்சியம் நிறைந்த உணவு
- பச்சை மற்றும் மஞ்சள் நிற காய்கறிகள் – ஆக்ஸிஜன் ஏற்றம் பாக்கவாதத்திலிருந்து பாதுகாக்கிறது

- முட்டையிலுள்ள மஞ்சள் கரு
- ஈரப்பதமான கொழுப்பு நிறைந்த எண்ணெய் (பாமாயில், வனஸ்பதி, டால்டா)

- <u>மற்றவை:</u>
  - மது
  - புகையிலை- நிக்கோட்டின் பொருட்கள் (சிகரெட், பீடி, குட்கா, மூக்குப் பொடி, புகையிலை இலைகள்)

மூக்கு மற்றும் இரைப்பை வழியாக குழாய் மூலம் உணவு செலுத்துவது:

- நோயாளிகளுக்கு செயல்முறையை விளக்குவது
- படுக்கைக்கு பக்கத்தில் பொருட்களை வைத்தல்
- அரை அமர்ந்த நிலையில் நோயாளியை நிலைப்படுத்த வேண்டும்
- பொறுத்தப்பட்ட குழாயை சரிபார்த்தல்

- பொறுத்தப்பட்ட குழாயின் முடிவில் சிரிஞ்சை பொறுத்தி உள்ளிருக்கும் வாயுவை உறுஞ்சி வெளியெடுக்க வேண்டும்.
- குழாயின் நுணியை தண்ணீர் நிறைந்த கிண்ணத்தில் வைத்து அதில் குமிழிகள் வருகிறதா என்று கண்காணிக்க வேண்டு. நுரையீரலில் வாயு குமிழிகள் இருப்பதை அது உணர்த்தும்.
- உட்செலுத்தும் உணவின் வெப்பநிலைய சரிபார்க்க வேண்டும்.
- 60 மி.லி சிரிஞ்சை குழாயில் பொறுத்தி அதனுடன் உணவு செலுத்தும் குழாயை பொறுத்தவும்.
- நோயாளியின் தலையிலிருந்து 45 செ.மீ உயரமான நிலையில் அந்த உணவு குழாய் இருத்தல் வேண்டும்,

- அந்த உணவு குழாயை உபயோகப்படுத்தும் முன்னரும், பின்னரும் 15–30மி.லி தண்ணீரினால் கழுவ வேண்டும்.
- குழாயினுள் காற்று உள்ளேறுதலை தவிர்க்க வேண்டும்.